ZEROSTART®

COLD WEATHER STARTING PRODUCTS

APPLICATION GUIDE & PRODUCT CATALOG

2014



AUTOMOTIVE



AGRICULTURE



HEAVY DUTY



INDUSTRIAL

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THERMAL MANAGEMENT SYSTEMS & CONTROLS

Phillips & Temro Industries is the leading supplier of Thermal Management Systems and Controls. For more than 90 years, Phillips & Temro Industries has supplied thermal solutions to original equipment manufacturers and aftermarket distributors worldwide. Having both ISO9001/TS16949 quality management and ISO14001 environmental certifications demonstrates the commitment to continuous improvement and customer satisfaction. With manufacturing facilities in the United States, Canada, United Kingdom and China, Phillips & Temro Industries provides global distribution of thermal management for cold weather starting, comfort and convenience, emissions control, exhaust silencing and engine cooling products. Dedication to philosophies of lean manufacturing allow us to exceed our customer's requirements for value, service and delivery.

COOLING TECHNOLOGY — TRUFLO

HEATING TECHNOLOGY — TEMRO, ZEROSTART, ARCTIC FOX

SILENCING/EMISSION TECHNOLOGY — em, Owl

HYBRID/EV TECHNOLOGY

Avoid Common Engine Heater Installation Mistakes:

DO NOT USE AN ENGINE HEATER WHEN USING 100% ANTIFREEZE. A 50/50 mixture is recommended. Using a mixture that is richer than 65% will cause the element to fail prematurely.

DO NOT RUN YOUR ENGINE WHILE THE ENGINE HEATER IS PLUGGED IN. This will create an air bubble around the element which will then cause the element to burn out prematurely.

DO NOT PLUG IN YOUR ENGINE HEATER PRIOR TO INSTALLING TO "SEE IF IT WORKS". Without being submerged in liquid, the heat generated has nowhere to go and could result in serious burns.

HOW TO SAFELY TEST A HEATER. Connect a multi-meter to the heater pins. A reading between 5 ohms and 100 ohms indicates that the heater is working correctly.

DO NOT USE PETROLEUM BASED LUBRICANTS ON THE O-RING. A petroleum based lubricant will significantly reduce the life of the O-ring. Use antifreeze instead.

DO NOT OVER TIGHTEN THE HEATER. The O-ring will form an adequate seal when the heater is torqued to the specifications in the instructions. Over tightening will strip the screw threads and reduce the quality of the seal.

AFTER HEATER USE, DISCONNECT THE EXTENSION CORD FROM THE HEATER CORD BY FIRMLY GRASPING EACH PLUG AND PULLING IN OPPOSITE DIRECTIONS. Only grasp the plugs. Do not grasp, pull, yank or snap the cords to disconnect power. Damage will result to the power cord connections which could result in permanent malfunction and even an electrical short.

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COLD WEATHER STARTING PRODUCTS

2014 Cold Weather Starting Products
Application Guide & Product Catalog

Due to our constant efforts to provide the most accurate and complete information possible, the information presented in this publication is subject to change. To be sure you have the most current information, visit our website **www.phillipsandtemro.com**

If there are any new product or application updates, you can download replacement pages and/or entire catalog files from the website. If you require additional information regarding Phillips & Temro Industries products and services, please check our website.

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Phillips & Temro Industries

9700 West 74th Street
Eden Prairie, MN 55344
(800) 328-6108
(952) 941-9700 • Fax (952) 941-2285

For questions, e-mail:
customerservice@phillipsandtemro.com

For sales inquiries, e-mail:
sales@phillipsandtemro.com

QUALITY REGISTERED FIRM ISO/TS 16949:2002

ENVIRONMENTALLY REGISTERED FIRM ISO 14001

PHILLIPS & TEMRO INDUSTRIES
Eden Prairie, MN

ZEROSTART
COLD WEATHER STARTING PRODUCTS

ENGINE BLOCK HEATERS

The choice of professional installers

- Ensure quick winter starts - reduce engine wear
- Highest rated, most efficient type of heater
- V-Loc™ locking system provides quick, trouble-free installation
- Plated stamped-steel & forged brass adapters with copper heating element for maximum life and efficiency.
- Direct OEM replacement in many applications
- Replaceable cordset





V-Loc™ in fully open position, prior to tightening locking bolt.



V-Loc™ clamp spreads outward as locking bolt it tightened.



V-Loc™ in fully locked position. Heater is secured in engine block.

CHAUFFE-MOTEURS

Le choix des installateurs professionnels

- Pour assurer des démarrages rapides en hiver et réduire l'usure du moteur
- Le réchauffeur le mieux coté et le plus efficace
- Le système de verrouillage V-Loc™ permet une installation simple et sans problème
- Adaptateurs en laiton forgé et en acier estampé plaqué avec élément chauffant en cuivre pour une durabilité et une efficacité maximales
- Remplacement direct d'équipement d'origine dans plusieurs applications
- Cordon amovible remplaçable





V-Loc™ en position ouverte avant de serrer le boulon d'arrêt.



La fixation V-Loc™ s'ouvre vers l'extérieur quand on serre le boulon d'arrêt.



V-Loc™ en position complètement verrouillé. Le réchauffeur est fixé au bloc-moteur.

Automotive & light-duty Truck Applications

All automotive applications are CSA approved.

Automotive/light-duty truck listings appear as follows:

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
1956-62 V8 327 CID	3100039	3600006	1-1/2"	LC or RC	6 o'clock	1

Year(s), type of engine, size/model of engine, possible additional information.

Immersion/Freeze Plug Heater part number
"See Dealer" indicates solution only available through dealer.

Replacement Cord Part Number
Also see page 80-81 for replacement cord information.

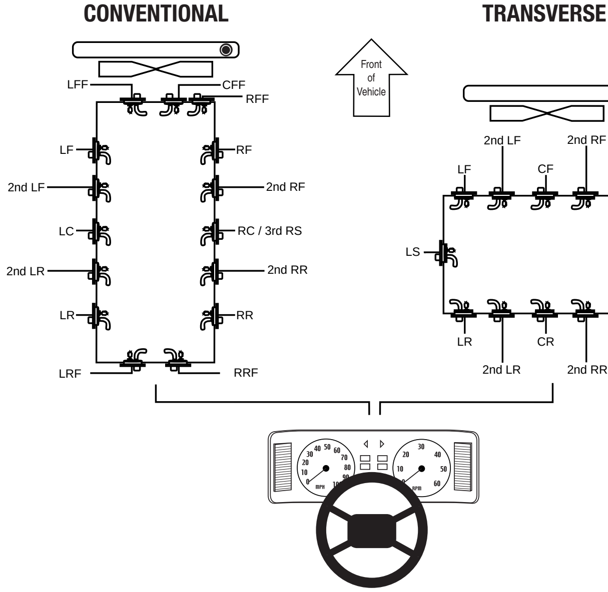
Bore Diameter
Freeze Plug Heaters will list a size similar to the above heater (English or metric). Threaded type heaters will list "THD" after the size. Heaters with NPT threads will list "NPT" after the size. "Clamp-on" entry indicates an external bolt-on type heater is recommended. "Cartridge" entry indicates that a cartridge type heater is recommended.

Installation location
Use chart below to assure proper installation location.

Point element
Use the clock position listed to determine the direction the element should point. "N/A" entry indicates a threaded heater with no element bend, or recommended heater has no requirements for element direction.

Notes
If a number appears in this column, see page 26 for important information regarding application.

Where a Freeze Plug style heater is specified, use the chart below to determine the proper mounting location. Unless otherwise noted, freeze plugs are numbered from front.



Automotive Applications:
Diagram shown from driver's seat view.

- CFF......Center Front Face
- CF......Center Front
- CR......Center Rear
- F......Front
- FF......Front Face of Block
- LC......Left Center
- LF......Left Front
- 2nd LF......2nd from Left, Front
- LFF......Front Face, Left Cylinder
- LLC......Left Side, Lower Center
- LR......Left Rear
- 2nd LR......2nd from Left, Rear
- LS......Left Side
- R......Rear
- RC......Right Center
- Rear......Rear Face or Side
- RF......Right Front
- 2nd RF......2nd from Right Front
- RFF......Front Face, Right Cylinder Head
- RR......Right Rear
- RS......Right Side
- 3rd RS......3rd from Firewall (FW) Right Side
- 2nd RR......2nd Core Hole from the Right Rear

Applications automobiles et camions légers

Les listes pour automobiles et camions légers sont présentées comme suit :

Toutes les applications automobiles sont approuvées par la CSA.

MARQUE, MODÈLE, ANNÉE & MOTEUR	CHAUFFE-MOTEUR À IMMERSION (sauf indication contraire))					
	Chauffe-moteur No. pièce	Cordon de rempl. No. pièce	Diamètre de l'alésage	Emplacement pour Installation	Orientation de l'élément	NOTES*
Année(s), type de moteur, puissance/modèle du moteur, renseignements supplémentaires possibles.						
1956-62 V8 327 CID	3100039	3600006	1-1/2"	LC or RC	6 o'clock	1

Numéro de pièce du thermoplongeur/chauffe-moteur
Voir le concessionnaire» indique que la solution est disponible seulement chez votre concessionnaire

Numéro de pièce du cordon de rechange
Consultez également la page 80-81 pour de l'information sur le cordon de rechange.

Diamètre de l'alésage
Les chauffe-moteurs à immersion montreront une taille similaire au chauffe-moteur ci-dessus (unité anglaise ou métrique). Les chauffe-moteurs de type fileté montreront THD suite à la grandeur affichée. Les chauffe-moteurs avec le filetage de la norme National Pipe Thread montreront NPT suite à la grandeur affichée. L'inscription ''Clamp-on" recommande un chauffe-moteur à installation externe tandis que l'inscription ''Cartridge" un chauffe-moteur à cartouche.

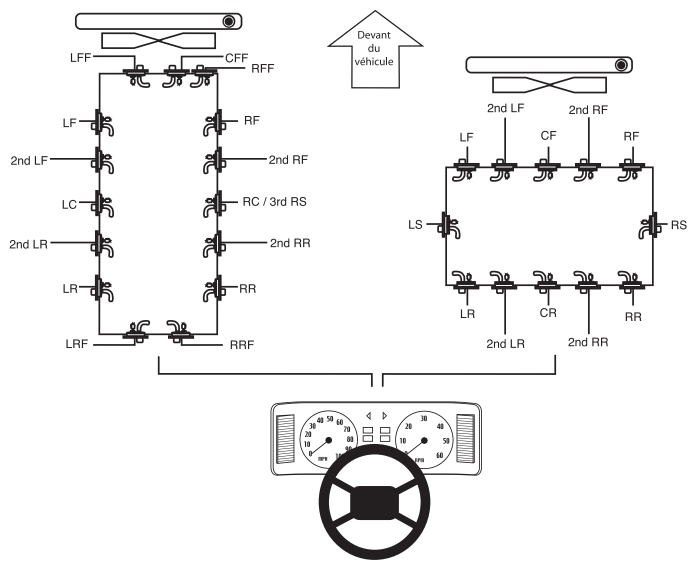
Site d'installation
Utilisez le graphique ci-dessous pour vous assurer du site d'installation approprié.

Orientation de l'élément
Utilisez la position horaire inscrite pour établir la direction dans laquelle l'élément doit être orienté. « S.O. » indique un réchauffeur fileté sans courbure de l'élément ou un réchauffeur recommandé sans exigences relatives à l'orientation.

Remarques
Si un numéro apparaît dans cette colonne, consultez la page 26 pour des renseignements importants concernant l'utilisation.

Si un chauffe-moteur est indiqué, utilisez le graphique ci-dessous pour déterminer l'emplacement approprié pour le montage. À moins d'indication contraire, les chauffe-moteurs sont numérotés sur le devant.

TRADITIONNELLE **TRANSVERSALE**



Applications automobiles :
Le schéma est montré du point de vue du siège du conducteur.

CFF ....Face avant au centre
CF ....Avant au centre
CR ....Arrière au centre
F ....Avant
FF....................Face avant du bloc
LC....................Centre gauche
LF ....Gauche avant
2nd LF ....2e de la gauche, avant
LFF ....Face avant, cylindre gauche
LLC ....Côté gauche, centre inférieur
LR ....Gauche arrière
2nd LR....................2e de la gauche arrière
LS ....Côté gauche
R ....Arrière
RC....................Centre droit
Rear ....Arrière
RF....................Droite avant
2nd RF ....2e de la droite avant
RFF. ....Face avant, culasse droite
RR....................Droite arrière
RS ....Côté droit
3rd RS....................3e de la cloison pare-feu (CD) côté droit
2nd RR ....2e bouchon de la droite arrière

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MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
ACURA						
4 Cylinder						
1996-2000 L4 - 1.6L	3100006	3600005	28 MM THD	LR	N/A	
1987-89 L4 - 1.6L	3400001	3600002	CLAMP-ON	N/A	N/A	
2002-2005 L4 - 1.7L	3100006	3600005	28 MM THD	LR	N/A	
1990-2001 L4 - 1.7, 1.8L	3100006	3600005	28 MM THD	RF	N/A	
2002-2006 L4 - 2.0L [RSX]	3100006	3600005	28 MM THD	RR	N/A	
2006-2011 L4 - 2.0L [CSX]	3100006	3600005	28 MM THD	RR	N/A	
1995-97 L4 - 2.2L [CL Coupe]	3100006	3600005	28 MM THD	LR	N/A	
1998-99 L4 - 2.3L [CL Coupe]	3100006	3600005	28 MM THD	LR	N/A	
2004-2014 L4 - 2.4L [TSX]	See Dealer	N/A	N/A	N/A	N/A	
5 Cylinder						
1992-98 L5 - 2.5L	3100006	3600005	28 MM THD	RF	N/A	
6 Cylinder						
1987-90 V6 - 2.5, 2.7L	See Dealer		N/A	N/A	N/A	
1991-99 V6 - 3.2L	3100006	3600005	28 MM THD	LC	N/A	
1993-2005 V6 - 3.0, 3.2L [NSX]	See Dealer	N/A	N/A	N/A	N/A	
1997-99 V6 - 3.0L [CL coupe]	3100006	3600005	28 MM THD	LF	N/A	
1999-2007 V6 - 3.2 [TL, CL coupe]]	3100006	3600005	28 MM THD	LF	N/A	
2007-2010 V6 - 3.5L [TL Type S]	3100006	3600005	28 MM THD	LF	N/A	
1996-2004 V6 - 3.5 [RL]	3100006	3600005	28 MM THD	LF	N/A	
2005-2012 V6 - 3.5L [RL]	3100006	3600005	28 MM THD	LF	N/A	
2009-2014 V6 - 3.7L [TL]	3100006	3600005	28 MM THD	LF	N/A	
LIGHT TRUCK						
2007-20010L4 - 2.3L [RDX]	3100006	3600005	28 MM THD		N/A	
1998-00 V6 - 3.5L	See Dealer	N/A	N/A	N/A	N/A	
2001-2006 V6 - 3.5L [MDX]	3100006	3600005	28 MM THD	LF	N/A	
2007-2013 V6 - 3.7L [MDX]	3100006	3600005	28 MM THD	LF	N/A	
AMC - EXCEPT JEEP AND EAGLE						
4 Cylinder						
1984 L4 - 2.5L	3100065	3600006	1-3/4"	LR	6 o'clock	
1980-83 L4 - 2.5L (Pontiac engine)	3100054	3600006	1-5/8"	LR	12 o'clock	
6 Cylinder						
1964-87 L6 - 199, 232, 258 cu. In. (4.2L)	3100072	3600006	2"	LR	12 o'clock	
8 Cylinder						
1956-62 V8 - 327 cu. in.	3100039	3600006	1-1/2"	LC or RC	6 o'clock	
1966-80 V8 - 290, 304, 343, 360, 390, 401 cu. in.	3100039	3600006	1-1/2"	LR	5 o'clock	
AUDI						
4 Cylinder						
1973-88 L4 - 1471cc	3100034	3600016	36.5 MM	2ND RS	6 o'clock	2
1986-90 L4 - 1.8, 2.0L	3100034	3600016	36.5 MM	RC	6 o'clock	2
1997-2005 L4 - 1.8L (TURBO)	See Dealer	N/A	N/A	N/A	N/A	
2005-2014 L4 - 2.0L (TURBO FSI & TSI)	See Dealer	N/A	N/A	N/A	N/A	
2010-2014 L4 - 2.0L DIESEL	See Dealer	N/A	N/A	N/A	N/A	
5 Cylinder						
1980-86 L5 - 2.0L, 2.1L & 2.2L (Except TURBO)	3100034	3600016	36.5 MM	RC	6 o'clock	2
1987-95 L5 - 2.2, 2.3L	3100035	3600016	36.5 MM	RF or 2ND RF	3 o'clock	2
2012-2014 L5 - 2.5L (TURBO)	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
1992-95 V6 - 2.8L	See Dealer	N/A	N/A	N/A	N/A	
1996-2001 V6 - 2.8L	See Dealer	N/A	N/A	N/A	N/A	
2000-2004 V6 - 2.7L (TURBO)	See Dealer	N/A	N/A	N/A	N/A	
2002-2005 V6 - 3.0L	See Dealer	N/A	N/A	N/A	N/A	
2009-2014 V6 - 3.0L Supercharged	See Dealer	N/A	N/A	N/A	N/A	
2010-2014 V6 - 3.0L DIESEL	See Dealer	N/A	N/A	N/A	N/A	
2004-2009 V6 - 3.2L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2005-2011 V6 - 3.2L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	
2006-2010 V6 - 3.6L	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
2012-2014 V8 - 4.0 Supercharged	See Dealer	N/A	N/A	N/A	N/A	
1992-2014 V8 - 3.6, 3.7, 4.2L	See Dealer	N/A	N/A	N/A	N/A	
10 Cylinder						
2006-2014 V10 - 5.2L	See Dealer	N/A	N/A	N/A	N/A	
12 Cylinder						
2006-2009 W12 - 6.0L	See Dealer	N/A	N/A	N/A	N/A	
2011-2013 W12 - 6.3L	See Dealer	N/A	N/A	N/A	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

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MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
BMW						
4 Cylinder						
1969-90 L4 - SOHC	3100030	3600006	36 MM	RC	6 o'clock	
6 Cylinder						
1978-83 L6 - ALL (Except 528E)	3100030	3600006	36 MM	LF	3 o'clock	
1982-91 L6 - 2.5, 2.7, 3.5L	3100063	3600006	44 MM	2ND RF	4 o'clock	
1992-99 24-Valve L6- 2.0, 2.5, 2.8, 3.0, 3.2L	See Dealer	N/A	N/A	N/A	N/A	
1998-2005 24-Valve L6 - 2.8, 3.0, 3.2, 3.4L (Aluminum Block)	See Dealer	N/A	N/A	N/A	N/A	
2006-2014 L6 - 3.0L	See Dealer	N/A	N/A	N/A	N/A	
2007-2010 L6 - 3.0L (N54) Twin Turbo	See Dealer	N/A	N/A	N/A	N/A	
2010-2014 L6 - 3.0L (N55) Turbo	See Dealer	N/A	N/A	N/A	N/A	
2010-2014 L6 - 3.0L Diesel	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
1993-2009 V8 - 3.0, 4.0, 4.4, 4.6, 4.8, 5.0L	See Dealer	N/A	N/A	N/A	N/A	
2008-2012 V8 - 4.0L (S65B40)	See Dealer	N/A	N/A	N/A	N/A	
2009-2014 V8 - 4.4L Turbo	See Dealer	N/A	N/A	N/A	N/A	
10 Cylinder						
2006-2009 V10 - 5.0L (S65B50)	See Dealer	N/A	N/A	N/A	N/A	
12 Cylinder						
1988-2003 V12 - 5.0, 5.4L	See Dealer	N/A	N/A	N/A	N/A	
2004-2008 V12 - 6.0L	See Dealer	N/A	N/A	N/A	N/A	
2010-2014 V12 - 6.0L Turbo	See Dealer	N/A	N/A	N/A	N/A	
BUICK						
4 Cylinder						
1982-86 L4 - 1.8L	3100014	3600006	34 MM	LF	12 o'clock	
1983-89 L4 - 1.8, 2.0L OHC (Brazil engine)	3100015	3600006	34 MM	2ND LF	3 o'clock	2
1983-84 L4 - 2.0L	3100014	3600006	34 MM	LF	12 o'clock	
1985-86 L4 - 2.0L	3100062	3600006	42 MM	LF	4 o'clock	
1987-96 L4 - 2.0L, 2.2L (Transverse)	3100081	3600006	42 MM	LF	9 o'clock	
2012 L4 - 2.0L Turbo	See Dealer	N/A	N/A	N/A	N/A	
1987-93 L4 - 2.3L QUAD IV	3100093	3600006	3/4" NPT	N/A	N/A	3
1994-95 L4 - 2.3L QUAD IV GEN II	3100001	3600006	1/2" NPT	In water pump	N/A	
1996-99 L4 - 2.4L (Twin Cam)	3100001	3600006	1/2" NPT	In water pump	N/A	
2011-2014 L4 - 2.4L Ecotec	See Dealer	N/A	N/A	N/A	N/A	
1980-92 L4 - 2.5L	3100076	3600006	1-5/8"	LF	12 o'clock	
6 Cylinder						
1980-86 V6 - 2.8L (Transverse) Except VIN W	3100014	3600006	34 MM	RS	3 o'clock	7
1987-89 V6 - 2.8L (Transverse) VIN W	3100015	3600006	34 MM	CR	3 o'clock	2
1982-88 V6 - 3.0L (Transverse)	3100041	3600006	1-1/2"	LF	12 o'clock	1
2010-2011 V6 - 3.0L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1989-2004 V6 - 3.1L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2
2005-2007 V6 - 3.1L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2002-2003 V6 - 3.4L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2
1978-79 V6 - 196 cu. in.	3100039	3600006	1-1/2"	RR	12 o'clock	1
2005-2014 V6 - 3.6L (Transverse)	3100110	3600082	Cartridge	LR	N/A	15
1988-2004 V6 - 3300, 3800 (Transverse)	3100041	3600006	1-1/2"	RF or LF	12 o'clock	15
2005-2009 V6 - 3800 (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
1975-88 V6 - 3.8L (231 cu. in.) (Conventional)	3100039	3600006	1-1/2"	RR	12 o'clock	1
1984-88 V6 - 3.8L (231 cu. in.) (Transverse)	3100041	3600006	1-1/2"	RF or LF	3 o'clock	
2009-2012 V6 - 3.9L (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
1980-85 V6 - 4.1L (252 cu. in.)	3100039	3600006	1-1/2"	RR	12 o'clock	
1982-85 V6 - 4.3L (265 cu. in.) DIESEL (Conv)	3100039	3600006	1-1/2"	LF or RF	12 o'clock	1
1982-85 V6 - 4.3L (263 cu. in.) DIESEL (Transverse)	3100039	3600006	1-1/2"	RR or RF	12 o'clock	
1968-76 L6 - 250 cu. in.	3100054	3600006	1-5/8"	LR	12 o'clock	
8 Cylinder						
1975-76 V8 - 260 cu. in.	3100039	3600006	1-1/2"	RF	6 o'clock	
1981-82 V8 - 4.4L (267 cu. in.)	3100057	3600006	1-5/8"	LR	9 o'clock	
1977-82 V8 - 4.3 L (265 cu. in.) 4.9L (301 cu. in.)	3100070	3600006	1-15/16"	LC	11 o'clock	
2006-2012 V8 - 4.6L (North Star)	See Dealer	3600082	N/A	N/A	N/A	
1977-95 V8 - 5.0L (305 cu. in.) (Chevrolet engine)	3100057	3600006	1-5/8"	LR	9 o'clock	
1981-91 V8 - 5.0L (307 cu. in.) (Oldsmobile engine)	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
2008-2009 V8 - 5.3L (Transverse)	3100109	3600082	28 MM THD	RF	N/A	15
1968-81 V8 - 5.7L (350 cu. in.) (Buick engine)	3100039	3600006	1-1/2"	LF or RR	12 o'clock	1
1980-85 V8 - 5.7L (350 cu. in.) DIESEL	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1991-96 V8 - 5.0L (305 cu. in.), 5.7L (350 cu. in.) (Chevrolet engine)	3100057	3600006	1-5/8"	LR	9 o'clock	12

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
1975-77 V8 - 400 cu. in.	3100070	3600006	49 MM	LF	12 o'clock	
1977-79 V8 - 403 cu. in.	3100039	3600006	1-1/2"	RF	12 o'clock	
1967-71 V8 - 430, 455 cu. in.	3100039	3600006	1-1/2"	RC	12 o'clock	
LIGHT DUTY TRUCKS						
6 Cylinder						
2002-2004 V6 - 3.4L	3100015	3600006	34 MM	CR	3 o'clock	2
2005-2006 V6 - 3.4L	See Dealer	N/A	N/A	N/A	N/A	
2004 V6 - 3.5L	3100005	3600005	28 MM THD	CR	N/A	
2004 V6 - 3.6L (Transverse)	3100106	3600100	Cartridge	LR	N/A	
2005-2014 V6 - 3.6L (Transverse)	3100110	3600082	Cartridge	LR	N/A	15
2001-2003 V6 - 3800 (Transverse)	3100041	3600006	1-1/2"	RF or LF	12 o'clock	
2003-2004 L6 - 4.2L (Conventional)	3100005	3600100	28 MM THD	LF	N/A	
2005-2007 L6 - 4.2L (Conventional)	3100109	3600082	28 MM THD	LF	N/A	15
8 Cylinder						
2003-2004 V8 - 5.3L (Conventional)	3100005	3600100	28 MM THD	LR	N/A	
2005-2007 V8 - 5.3L (Conventional)	3100109	3600082	28 MM THD	LR	N/A	15
CADILLAC						
4 Cylinder						
1982-84 L4 - 1.8, 2.0L	3100014	3600006	34 MM	LF	12 o'clock	
1985-88 L4 - 2.0L	3100062	3600006	42 MM	LF	4 o'clock	
6 Cylinder						
1985-86 V6 - 2.8L (Transverse)	3100014	3600006	34 MM	RS	3 o'clock	7
2005-2007 V6 2.8L (Conventional)	3100110	3600082	Cartridge	RR	N/A	15
1997-2001 V6 - 3.0L	3100006	3600005	28 MM	N/A	N/A	
2010-2014 V6 - 3.0L	3100110	3600082	Cartridge	RR	N/A	15
2002-2004 V6 - 3.2L	3100006	3600100	28 MM	LR	N/A	
2005-2006 V6 - 3.2L	See Dealer	N/A	N/A	N/A	N/A	
1986-88 V6 - 2.8L (Transverse) VIN W	3100015	3600006	34 MM	CR	3 o'clock	2
2004 V6 - 3.6L (Conventional)	3100106	3600100	Cartridge	RR	N/A	
2005-2014 V6 - 3.6L (Conventional)	3100110	3600082	Cartridge	RR	N/A	15
1981-82 V6 - 4.1L (252 cu. in.)	3100039	3600006	1-1/2"	RR	12 o'clock	1
1984-85 V6 - 4.3L (262 cu. in.) DIESEL	3100039	3600006	1-1/2"	RF or RR	12 o'clock	
8 Cylinder						
1982-94 V8 - 4.1, 4.5, 4.9L (Transverse)	See Dealer	N/A	CLAMP-ON	N/A	N/A	
1993-2012 V8 - 4.6L (Transverse) [Northstar]	See Dealer	N/A	CLAMP-ON	N/A	N/A	
2005-2009 V8 - 4.4L (Conventional) [Northstar SC]	3100109	3600082	28 MM THD	RC	N/A	15
2004 V8 - 4.6L (Conventional) [Northstar]	3100005	3600100	28 MM THD	RC	N/A	
2005-2010 V8 - 4.6L (Conventional) [Northstar]	3100109	3600082	28 MM THD	RC	N/A	15
1986-92 V8 - 5.0L (307 cu. in.)	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1990-96 V8 - 5.0, 5.7L (Chevrolet engine)	3100057	3600006	1-5/8"	LR	9 o'clock	
1976-81 V8 - 5.7L (350 cu. in.)	3100039	3600006	1-1/2"	LC or RC	12 o'clock	
1978-85 V8 - 5.7L (350 cu. in.) DIESEL	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
2004 V8 - 5.7L [CTS-V]	3100005	3600100	28 MM THD	LF	N/A	
2005-2007 V8 - 5.7L [CTS-V]	3100109	3600082	28 MM THD	LF	N/A	15
1980-84 V8 - 6.0L (368 cu. in.)	3100065	3600006	1-3/4"	RC	12 o'clock	
2009-2014 V8 - 6.2L (LSA) [CTS-V]	3100109	3600082	28 MM THD	LF	N/A	15
1977-79 V8 - 425 cu. in.	3100065	3600006	1-3/4"	RC	11 o'clock	
1968-76 V8 - 472, 500 cu. in.	3100065	3600006	1-3/4"	LF or RC	12 o'clock	
LIGHT DUTY TRUCKS						
6 Cylinder						
2010-2012 V6 - 2.8L Turbo	See Dealer	N/A	N/A	N/A	N/A	
2010-2014 V6 - 3.0L	3100110	3600082	Cartridge	RR	N/A	15
2004 V6 - 3.6L (Conventional)	3100106	3600100	Cartridge	RR	N/A	
2005-2009 V6 - 3.6L (Conventional)	3100110	3600082	Cartridge	RR	N/A	15
8 Cylinder						
2004 V8 - 4.6L (Conventional) [Northstar]	3100005	3600100	28 MM THD	RC	N/A	
2005-2009 V8 - 4.6L (Conventional) [Northstar]	3100109	3600082	28 MM THD	RC	N/A	15
2001-2004 V8 - 5.3, 6.0L	3100005	3600100	28 MM THD	LR	N/A	
2005-2006 V8 - 5.3, 6.0L	3100109	3600082	28 MM THD	LR	N/A	15
2009-2013 V8 - 6.0L Hybrid	3100109	3600082	28 MM THD	LF	N/A	
2007-2014 V8 - 6.2L	3100109	3600082	28 MM THD	LF	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
CHEVROLET (Also see Geo)						
AUTOMOTIVE						
3 Cylinder						
1986-88 L3 - 1.0L	3400002	3600002	CLAMP-ON	N/A	N/A	
1998-00 L3 - 1.0L	3400002	3600002	CLAMP-ON	N/A	N/A	
4 Cylinder						
1998-99 L4 - 1.3L (Suzuki engine)	3400004	3600020	CLAMP-ON	N/A	N/A	
1976-87 L4 - 1.4, 1.6L (Conventional)	3100014	3600006	34 MM	RF	6 o'clock	
2011-2014 L4 - 1.4L	See Dealer	N/A	Oil Pan Heater	N/A	N/A	
1985-88 L4 - 1.5L (Transverse) Spectrum	3100018	3600006	35 MM	CR	12 o'clock	
2004-2014 L4 - 1.6L [Aveo]	See Dealer	N/A	Oil Pan Heater	N/A	N/A	
1985-88 L4 - 1.6L (Transverse) Nova	3100049	3600006	40 MM	CF	6 or 12 o'clock	
1982-84 L4 - 1.8L (Transverse)	3100014	3600006	34 MM	LF	12 o'clock	
1982-87 L4 - 1.8L DIESEL	3100018	3600006	35 MM	RR	12 o'clock	
1998-2002 L4 - 1.8L (Toyota Eng.) (Prizm)	3100129	3600083	Cartridge	LR	N/A	
2011-2014 L4 - 1.8L	See Dealer	N/A	Oil Pan Heater	N/A	N/A	
1983-84 L4 - 2.0L (122 cu. in.) (Transverse)	See Dealer	N/A	34 MM	LF	12 o'clock	
1985-86 L4 - 2.0L (122 cu. in.) (Transverse)	3100062	3600006	42 MM	LF	4 o'clock	
2004-2009 L4 - 2.0L (Transverse) [Optra]	See Dealer	N/A	N/A	N/A	N/A	
1987-2002 L4 - 2.0L, 2.2L (Transverse)	3100081	3600006	42 MM	LF	9 o'clock	
2005-2008 L4 - 2.0L (Ecotec Supercharged) (Transverse)	3400020	3600082	CLAMP-ON	RR	N/A	15
2009 -2010 L4 - 2.0L (Ecotec Turbo) (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2002-2004 L4 2.2L (Ecotec) (Transverse)	3400019	3600100	CLAMP-ON	RR	N/A	
2005-2010 L4 2.2L (Ecotec) (Transverse)	3400020	3600082	CLAMP-ON	RR	N/A	15
1990-93 L4 - 2.3L QUAD IV	3100093	3600023	3/4" NPT	N/A	N/A	3
1994-95 L4 - 2.3L QUAD IV GEN II	3100001	3600002	1/2" NPT	N/A	N/A	
1996-2002 L4 - 2.4L (Twin Cam)	3100001	3600002	1/2" NPT	N/A	N/A	
2006-2014 L4 2.4L (Ecotec) (Transverse)	3400020	3600082	CLAMP-ON	RR	N/A	15
1980-92 L4 - 2.5L (Transverse)	3100076	3600006	1-5/8"	LF	12 o'clock	
1977-86 L4 - 2.5L (Conventional)	3100076	3600006	1-5/8"	LR	6 or 12 o'clock	
1962-70 L4 - 153 cu. in.	3100054	3600006	1-5/8"	LF	12 o'clock	
6 Cylinder						
2004 -2006 L6 - 2.5L (Transverse) [Epica]	See Dealer	N/A	N/A	N/A	N/A	
1980-88 V6 - 2.8L (Transverse) Except VIN W	3100014	3600006	34 MM	RS	3 o'clock	7
1985-89 V6 - 2.8L (Transverse) VIN W	3100015	3600006	34 MM	CR or CF	3 o'clock	2
1982-89 V6 - 2.8L (Conventional)	3100014	3600006	34 MM	RFF IN BLOCK	3 o'clock	
1990-96 V6 - 3.1, 3.4L (Conventional)	3100015	3600006	34 MM	RC	3 o'clock	2
1990-2003 V6 - 3.1L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2
1992-97 V6 - 3.4L DOHC (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2,5
2000-2004 V6 - 3.4L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2, 5
2005-2009 V6 - 3.4L (Transverse) [Equinox]	3100109	3600082	28 MM THD	CR	N/A	15
2004 V6 - 3.5L (Transverse)	3100005	3600100	28 MM THD	CR	N/A	
2005-2012 V6 - 3.5L (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
2008-2014 V6 - 3.6L (Transverse)	3100110	3600082	Cartridge	LR	N/A	15
2010-2014 V6 - 3.6L (Conventional)	3100110	3600082	Cartridge	RR	N/A	15
1980-84 V6 - 3.8L (229 cu. in.)	3100057	3600006	1-5/8"	LR	6 o'clock	
1978-88 V6 - 3.8L (231 cu. in.)	3100039	3600006	1-1/2"	RR	12 o'clock	1
1998-2004 V6 - 3.8L (Transverse)	3100041	3600006	1-1/2"	RF or LF	12 o'clock	
2005-2011 V6 - 3.8L (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
1986-88 V6 - 3.8L (231 cu. in.) (Transverse)	3100041	3600006	1-1/2"	LF	3 o'clock	
1995-2002 V6 - 3.8L [Camaro]	3100041	3600006	1-1/2"	RR		
2006-2012 V6 - 3.9L (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
1982-85 V6 - 4.3L (263 cu. in.) DIESEL (Conventional)	3100039	3600006	1-1/2"	LR or RF	12 o'clock	
1983-85 V6 - 4.3L (263 cu. in.) DIESEL (Transverse)	3100039	3600006	1-1/2"	RF or RR	12 o'clock	
1985-88 V6 - 4.3L (263 cu. in.)	3100057	3600006	1-5/8"	LR	6 o'clock	
1955-73 L6 - ALL	3100054	3600006	1-5/8"	LF	12 o'clock	
1978-79 V6 - 200 cu. in.	3100057	3600006	1-5/8"	LR	9 o'clock	
1974-79 L6 - 250 cu. in.	3100054	3600006	1-5/8"	LR	12 o'clock	
8 Cylinder						
1994-96 V8 - 4.3L	3100057	3600006	1-5/8"	LR	9 o'clock	
1958-97 V8 - 5.0, 5.7L, 262, 267, 283, 305, 307, 327, 350, 400 (265 HP)	3100057	3600006	1-5/8"	LR	9 o'clock	
1986-90 V8 - 5.0L, 307 cu. in. VIN Y	3100039	3600006	1-1/2"	LF or RF	12 o'clock	9, 12
2006-2010 V8 - 5.3L (Transverse)	3100109	3600082	28 MM THD	RF	N/A	15
1980-85 V8 - 5.7L (350 cu. in.) DIESEL	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1998-2002 V8 - 5.7L (350 cu. In.) [Camaro]	3100005	3600100	28 MM THD	LR	N/A	
1996-2004 V8 - 5.7L (350 cu. In.) [Corvette, inc Z06]	3100005	3600005	28 MM THD	LR	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
2005-2007 V8 - 6.0L LS2 [C6 Corvette]	3100109	3600082	28 MM THD	LF	N/A	15
2008-2014 V8 - 6.2L LS3 [C6 Corvette, Camaro]	3100109	3600082	28 MM THD	LF	N/A	15
2008-2014 V8 - 6.2L LS9 [C6 Corvette ZR1, Camaro ZL1]	3100109	3600082	28 MM THD	LF	N/A	15
2006-2013 V8 - 7.0L LS7 [C6 Corvette Z06]	3100109	3600082	28 MM THD	LF	N/A	15
1966-71 V8 - 396 cu. in.	3100065	3600006	1-3/4"	RC or RF	12 o'clock	
1970-77 V8 - 400 (300 HP), 402 cu. in.	3100065	3600006	1-3/4"	LF	3 o'clock	
1969 V8 - 427 cu. in.	3100065	3600006	1-3/4"	LF or RC	12 o'clock	
1970-77 V8 - 454 cu. in.	3100065	3600006	1-3/4"	RC	6 o'clock	
CHEVROLET & GMC (ALSO SEE GEO)						
LIGHT DUTY TRUCKS - Includes vans/MPV						
4 Cylinder						
1988-95 L4 - 1.6 (Suzuki engine)	3400003	3600002	CLAMP-ON	N/A	N/A	
1977-82 L4 - 1.8L	3100018	3600006	35 MM	LF	12 o'clock	
1982-86 L4 - 1.9L (119 cu. in.)	3100018	3600006	35 MM	LF	12 o'clock	
1983-85 L4 - 2.0L (122 cu. in.)	3100014	3600006	34 MM	LF	12 o'clock	
2009 -2010 L4 - 2.0L (Ecotec Turbo) (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1994-2003 L4 - 2.2L	3100081	3600006	42 MM	LR	9 o'clock	
1981-85 L4 - 2.2L DIESEL	3100068	3600006	1-3/4"	ANY LS	6 o'clock	
2006-2014 L4 2.4L (Ecotec) (Transverse)	3400020	3600082	CLAMP-ON	RR	N/A	15
1985-94 L4 - 2.5L (151 cu. in.)	3100076	3600006	1-5/8"	LR	6 or 12 o'clock	
1962-64 L4 - 153 cu. in.	3100054	3600006	1-5/8"	LF	12 o'clock	
2004 L4 - 2.8L (Conventional)	3100005	3600100	28 MM THD	LC	N/A	
2005-2006 L4 - 2.8L (Conventional)	3100109	3600082	28 MM THD	LC	N/A	15
2007-2012 L4 - 2.9L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	
5 Cylinder						
2004 L5 - 3.5L (Conventional)	3100005	3600100	28 MM THD	LC	N/A	
2005-2006 L5 - 3.5L (Conventional)	3100109	3600082	28 MM THD	LC	N/A	15
2007-2012 L5 - 3.7L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
1984-95 Forward/Tiltmaster (W7H, W7T)	3100089	3600006	1" NPT	RS (2 required)	N/A	
1987-95 Forward/Tiltmaster (W4, W5, W6, W7)	3100089	3600006	1" NPT	LS	N/A	
1982-93 V6 - 2.8L (173 cu. in.)	3100014	3600006	34 MM	RFF IN BLOCK	3 o'clock	6
2010-2012 V6 - 3.0L	See Dealer	N/A	N/A	N/A	N/A	
1990-96 V6 - 3.1L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2
1990-2004 V6 - 3.4L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2
2005-2009 V6 - 3.4L (Transverse)[Equinox]	3100109	3600082	28 MM THD	LC	N/A	15
2009 - 2014 V6 - 3.6L (Acadia, Terrain)	3100110	3600082	Cartridge	RR	N/A	15
1980-85 V6 - 3.8L (229 cu. in.) [El Camino]	3100057	3600006	1-5/8"	LR	9 o'clock	
1993-96 V6 - 3.8L (231 cu. in.) (Transverse)	3100041	3600006	1-1/2"	LF	3 o'clock	
1978-88 V6 - 3.8L (231 cu. in.) [El Camino]	3100039	3600006	1-1/2"	RR	12 o'clock	1
2002-2004 L6 - 4.2L	3100005	3600100	28 MM THD	LF	N/A	1
2005-2007 L6 - 4.2L	3100109	3600082	28 MM THD	LF	N/A	15
1985-2005 V6 - 4.3L (263 cu. in.)	3100054	3600006	1-5/8"	LR	12 o'clock	
2006-2014 V6 - 4.3L	3100115	N/A	1-5/8"	LR	12 o'clock	15
1974-89 L6 - 250, 292 cu. in.	3100054	3600006	1-5/8"	LR	12 o'clock	
1981-85 L6 - 4.1L (250 cu. in.)	3100054	3600006	1-5/8"	LR	12 o'clock	
1960-73 L6 - 194, 230, 248, 250, 261, 292 cu. in.	3100054	3600006	1-5/8"	LF	12 o'clock	
1960-74 V6 - 305, 351, 401, 478 cu. in.	3100065	3600006	1-3/4"	LF or RF	12 o'clock	
8 Cylinder						
1955-72 V8 - 265,283,305,307,327,350,400 (265 HP)	3100057	3600006	1-5/8"	LR	9 o'clock	
1958-65 V8 - 348, 409 cu. in.	3100065	3600006	1-3/4"	LR	12 o'clock	
1972-89 V8 - 366, 396, 402, 427 cu. in.	3100065	3600006	1-3/4"	RC	12 o'clock	
1978-84 V8 - 5.7L (350 cu. in.) DIESEL	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1981-00 V8 - 6.2, 6.5L DIESEL (600W heater)	3100057	3600006	1-5/8"	LC	6 or 12 o'clock	
1981-00 V8 - 6.2, 6.5L DIESEL (1000W heater)	3100059	3600006	1-5/8"	LC	6 or 12 o'clock	
2001-2006 V8 - 6.6L DIESEL (Duramax)	3100130	N/A	40MM	RF	12 o'clock	15
2007-2014 V8 - 6.6L DIESEL (Duramax)	3100130	3600006	40MM	RF	12 o'clock	15
1966-89 V8 - 7.4L (454 cu. in.)	3100065	3600006	1-3/4"	RC	6 o'clock	
1990-2004 V8 - 6.0, 5.7, 7.4L (366, 350, 454 cu. in.)	3100057	3600006	1-5/8"	LC or RC	6 o'clock	
1973-2002 V8 - 5.0, 5.7, 6.6L (305, 350, 400 cu. in.)	3100057	3600006	1-5/8"	LR	9 o'clock	10
1999-2004 V8 - 4.8, 5.3, 6.0, 8.1L (Gen 3)	3100005	3600100	28 MM THD	LR	N/A	
2005-2014 V8 - 4.8, 5.3, 6.0, 6.2, 8.1L (Gen 3 & 4)	3100109	3600082	28 MM THD	LR or LF	N/A	15
1965-85 V8 - DH 637	3100065	3600006	1-3/4"	LF or RC	12 o'clock	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
CHRYSLER						
AUTOMOTIVE						
4 Cylinder						
1979-84 L4 - 1.4L	3100016	3600006	35 MM	2ND LR	12 o'clock	
1985-96 L4 - 1.5L [G15B] (Transverse)	3100024	3600006	35 MM	LR or 2ND LR	9 o'clock	
1971-73 L4 - 1.5L (Conventional)	3100055	3600006	1-5/8"	2ND LS	12 o'clock	
1978-90 L4 - 1.6L (Transverse) [Colt/Champ]	3100016	3600006	35 MM	2ND LR	12 o'clock	
1989-90 L4 - 1.6L [4G61] DOHC TURBO	3100024	3600006	35 MM	2ND RR	4 o'clock	
1971-83 L4 - 1.6L (Conventional)	3100016	3600006	35 MM	LC	12 o'clock	
1978-83 L4 - 1.7L [Omni/Horizon]	3100034	3600016	36.5 MM	RR	6 o'clock	2
1989-96 L4 - 1.8L (4G93)	3100020	3600006	35 MM	RF	3 o'clock	
2006-2011 L4 - 1.8L (Transverse) [Calibre]	3100111	3600083	Cartridge	LF	N/A	
1974-82 L4 - 2.0L (Conventional)	3100049	3600006	40 MM	RF	6 o'clock	
1984-93 L4 - 2.0L [4G63] (Transverse)	3100024	3600006	35 MM	LR	3 o'clock	
1994-2005 L4 - 2.0L (Transverse) [Neon/Stratus]	3100024	3600006	35 MM	LR	3 o'clock	
2006-2012 L4 - 2.0L (Transverse)[Calibre]	3100111	3600083	Cartridge	LF	N/A	
1992-2006 L4 - 2.4L [4G64] (Transverse)	3100075	3600004	35 MM	LR	3 o'clock	13
2003-2007 L4 - 2.4L TURBO	3100075	3600004	35 MM	LR	3 o'clock	13
2008-2009 L4 - 2.4L TURBO	3100111	3600083	Cartridge	LF	N/A	
2006-2014 L4 - 2.4L (Transverse) [Calibre, Sebring]	3100111	3600083	Cartridge	LF	N/A	
1981-97 L4 - 2.2L, 2.5L Including TURBO (600W)	3100055	3600006	1-5/8"	CR	6 or 12 o'clock	
1981-97 L4 - 2.2L, 2.5L Including TURBO (400W)	3100053	3600006	1-5/8"	CR	6 or 12 o'clock	
1981-89 L4 - 2.6L (Transverse)	3100049	3600006	40 MM	RR	9 o'clock	
1978-85 L4 - 2.6L (Conventional)	3100049	3600006	40 MM	RR	9 o'clock	
1985-89 L4 - 2.6L (Conventional) TURBO	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
1995-00 V6 - 2.5L [6G73] (Transverse)	3100055	3600006	1-5/8"	CR	3 o'clock	
2002-2009 V6 - 2.7L (Transverse)	See Dealer	N/A	Cartridge	LR	N/A	
1987-98 V6 - 3.0L [6G72] (Transverse)	3100055	3600006	1-5/8"	LR	12 o'clock	
2001-2005 V6 - 3.0L	3100055	3600006	1-5/8"	RR	12 o'clock	
1988-92 V6 - 3.0L [Monaco]	3100031	3600006	36 MM	RRF IN HEAD	9 o'clock	
2004-2008 V6 - 3.2L (Conventional) [Crossfire, SRT6]	3100105	N/A	38 MM THD	Lower Hose Fitting	N/A	
1990-98 V6 - 3.3L (Transverse)	3100055	3600006	1-5/8"	LR	12-1 o'clock	
1993-97 V6 - 3.3L (Conventional)	3100055	3600006	1-5/8"	RR	12-1 o'clock	
1993-97 V6 - 3.5L (Conventional)	3100055	3600006	1-5/8"	RR	12 o'clock	
1998-2011 V6 - 2.7, 3.2, 3.5L (Conventional)	See Dealer	N/A	Cartridge	RR	N/A	
2011-2014 V6 - 3.6L Pentastar (Conventional)	See Dealer	N/A	Cartridge	RR	N/A	
2011-2014 V6 - 3.6L Pentastar (Transverse)	See Dealer	N/A	Cartridge	LR	N/A	
1961-83 L6 - 170, 198, 225 cu. in. (Slant)	3100055	3600006	1-5/8"	LF	12 o'clock	
8 Cylinder						
1966-69 V8 - 273, 318, 340 cu. in.	3100055	3600006	1-5/8"	LC or RC	12 o'clock	
1966-69 V8 - 383, 400, 413, 426, 440 cu. in.	3100055	3600006	1-5/8"	LC or RC	12 o'clock	
1970-89 V8 - 318, 340, 360, 383, 400, 440 cu. in.	3100055	3600006	1-5/8"	LC or RC	12 o'clock	
2004- 2014 V8 - 5.7L HEMI	See Dealer	N/A	Cartridge	LR	N/A	
2005-2010 V8 - 6.1L HEMI	See Dealer	N/A	Cartridge	LR	N/A	
2011-2014 V8 - 6.4L HEMI	See Dealer	N/A	Cartridge	LR	N/A	
10 Cylinder						
1996-2010 V10 - 8.0, 8.2, 8.3, 8.4L	See Dealer	N/A	N/A	N/A	N/A	
DODGE LIGHT & MEDIUM DUTY TRUCKS & VANS						
4 Cylinder						
1992-96 L4 - 1.8L (4G93) [Vista/Summit]	3100020	3600006	35 MM	RF	3 o'clock	
1979-82 L4 - 2.0L	3100049	3600006	40 MM	RF	6 o'clock	
1983-89 L4 - 2.0L (4G63B) (122 cu. in.)	3100024	3600006	35 MM	RR	3 o'clock	
1984-91 L4 - 2.0L [Vista]	3100024	3600006	35 MM	2ND LR	9 o'clock	
1982-87 L4 - 2.2L (Transverse)	3100055	3600006	1-5/8"	CR	6 o'clock	
1982-87 L4 - 2.2L (Transverse)	3100053	3600006	1-5/8"	CR	6 o'clock	
1987-97 L4 - 2.2L, 2.5L (Conventional)	3100055	3600006	1-5/8"	RC	6 o'clock	
1983-85 L4 - 2.3L [4D55] (140 cu. in.) DIESEL	See Dealer	3600006	40 MM	LR	9 o'clock	
1987-90 L4 - 2.4L [G64B] (Conventional)	3100024	3600006	35 MM	RR	3 o'clock	
1992-96 L4 - 2.4L [4G64] [Vista]	3100024	3600006	35 MM	LR/2ND LR	3 o'clock	13
1986-95 L4 - 2.5L (Transverse)	3100055	3600006	1-5/8"	CR	6 o'clock	
1986-95 L4 - 2.5L (Transverse)	3100053	3600006	1-5/8"	CR	6 o'clock	
1986-90 L4 - 2.6L (Transverse)	3100049	3600006	40 MM	RR	9 o'clock	
1979-90 L4 - 2.6L (G54B) (Conventional)	See Dealer	3600006	40 MM	RF	6 o'clock	
5 Cylinder						
2004-2006 L5 - 2.7L DIESEL	3100105	360-0084	38 MM THD	LF	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
6 Cylinder						
1987-2007 V6 - 3.0, 3.3L, 3.8L (Transverse)	3100055	3600006	1-5/8"	LR	12 o'clock	
1987-96 V6 - 3.0L [6G72] (Transverse)	3100055	3600006	1-5/8"	RR	9 o'clock	1
2007-2011 V6 - 3.0L DIESEL	See Dealer	N/A	N/A	N/A	N/A	
2011-2014 V6 - 3.6L Pentastar (Conventional)	See Dealer	N/A	Cartridge	RR	N/A	
2011-2014 V6 - 3.6L Pentastar (Transverse)	See Dealer	N/A	Cartridge	LR	N/A	
2002-2008 V6 - 3.7L	3100104	3600006	35 MM	2nd RR	N/A	
1987-2003 V6 - 3.9L (239 cu. in.)	3100055	3600006	1-5/8"	RR	6 o'clock	
2007-2010 V6 - 4.0L	See Dealer	N/A	N/A	N/A	N/A	
1960-88 L6 - 170, 198, 225 cu. in.	3100055	3600006	1-5/8"	LF	12 o'clock	
1989-2001 L6 - 5.9L Cummins DIESEL	3500030	3600008	58 MM	RC	6 o'clock	
2002-2006 L6 - 5.9L Cummins DIESEL	3500022	3600008	3/4 NPT	Rear of oil cooler	N/A	
2007-2014 L6 - 6.7L Cummins DIESEL	3500022	3600008	3/4 NPT	Rear of oil cooler	N/A	
8 Cylinder						
2000-2012 V8 - 4.7L	3100104	3600006	35 MM	RR	N/A	
1962-96 V8 - ALL [Except Dakota]	3100055	3600006	1-5/8"	LC or RC	12 o'clock	
1991-99 V8 - 5.2L [Dakota]	3100055	3600006	1-5/8"	RR	6 o'clock	
1996-2001 V8 - 5.2L [Ram] & [Durango]	3100055	3600006	1-5/8"	RR	6 o'clock	
2003-2014 V8 - 5.7L HEMI	See Dealer	N/A	Cartridge	LR	N/A	
1993-2002 V8 - 5.9L	3100055	3600006	1-5/8"	RR	6 o'clock	
10 Cylinder						
1994-2008 V10 - 8.0L	3100091	3600006	1-5/8"	RR	11 o'clock	
Note: Some Chrysler corp. engines have an .060 oversized frost plug hole. You may have to obtain an oversized o-ring 6027513 from a Chrysler dealer or from Temro 16874-32.						
DAEWOO						
4 Cylinder						
1999-2002 L4 - 1.6L [Lanos]	3100015	3600006	34 MM	LF	3 o'clock	
1999-2002 L4 - 2.0L [Nubira]	3100015	3600006	34 MM	LF	3 o'clock	
1999-2002 L4 - 2.2L [Leganza]	3100015	3600006	34 MM	LF	3 o'clock	
EAGLE						
4 Cylinder						
1989-96 L4 - 1.5L (G15G) (Transverse)	3100024	3600006	35 MM	2ND LR	9 o'clock	
1989-90 L4 - 1.6L (4G61) DOHC ENG	3100024	3600006	35 MM	2ND RR	4 o'clock	
1992-96 L4 - 1.8L (4G93)	3100020	3600006	35 MM	RF	3 o'clock	
1990-96 L4 - 1.8L (4G37) [Talon]	3100024	3600006	35 MM	RF	12 o'clock	
1989-98 L4 - 2.0L (4G63) TURBO [Talon]	See Dealer	N/A	N/A	N/A	N/A	
1995-97 L4 - 2.0L [Talon] (Chrysler engine)	3100024	3600006	35 MM	LR	3 o'clock	
1988-89 L4 - 2.2L	3100003	3600001	1" NPT	RF	6 o'clock	
1992-96 L4 - 2.4L (4G64) (Transverse) [Summit]	3100024	3600006	35 MM	LR/2ND LR	3 o'clock	13
1992-96 L4 - 2.4L (4G64) (Transverse)	3100024	3600006	35 MM	RF	3 o'clock	
1988-89 L4 - 2.5L (150 cu. in.)	3100065	3600006	1-3/4"	LF	12 o'clock	
6 Cylinder						
1988-93 V6 - 3.0L	3100031	3600006	36 MM	RRF IN HEAD	9 o'clock	
1993-97 V6 - 3.3L (Conventional)	3100055	3600006	1-5/8"	LF	12-1 o'clock	
1993-97 V6 - 3.5L (Conventional)	3100055	3600006	1-5/8"	RR	12 o'clock	
FIAT						
2011-2014 L4 - 1.4L	See Dealer	N/A	N/A	N/A	N/A	
2012 L4 - 1.4L (TURBO)	See Dealer	N/A	N/A	N/A	N/A	
FORD/MERCURY/LINCOLN						
AUTOMOTIVE						
4 Cylinder						
1988-97 L4 - 1.3L	3100016	3600006	35 MM	2ND LR	12 o'clock	
1971-81 L4 - 1.3, 1.6L	3100057	3600006	1-5/8"	LF	12 o'clock	
1971-73 L4 - 1.6L OHV	3100054	3600006	1-5/8"	LF	12 o'clock	
1978-80 L4 - 1.6L (Transverse) [Fiesta]	3100053	3600006	1-5/8"	LF	9 o'clock	
1981-85 L4 - 1.6L [Escort]	3100053	3600006	1-5/8"	LF	9 o'clock	
1988-96 L4 - 1.6L [Tracer]	3100016	3600006	35 MM	2ND RF	12 o'clock	
2010-2014 L4 - 1.6L	See Dealer	N/A	35 MM	RR	N/A	
1991-96 L4 - 1.8L DOHC	3100021	3600006	35 MM	2ND RF	9 o'clock	
1986-90 L4 - 1.9L (Transverse)	3100053	3600006	1-5/8"	LF	9 o'clock	
1991-2004 L4 - 1.9L CVH, 2.0L SPI (Transverse)	3100102	3600006	35 MM	LR	9 o'clock	
1971-75 L4 - 2.0L OHV/OHC	3100039	3600006	1-1/2"	RF	12 o'clock	
1972-75 L4 - 2.0L OHV	3100039	3600006	1-1/2"	RF	12 o'clock	
1984-88 L4 - 2.0L DIESEL	3100016	3600006	35 MM	2ND LF	12 o'clock	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
1993-97 L4 - 2.0L (Mazda engine)	3100023	3600006	35 MM	RR	8 o'clock	
1995-2004 L4 - 2.0L (Zetec engine, inc SVT)*	3100018	3600006	35 MM	RR	3 o'clock	
2004-2010 L4 - 2.0L (Duratec) (Transverse)	3100002	3600001	3/4" NPT	LR	N/A	
2011-2012 L4 - 2.0L (Focus)	3100002	3600001	3/4" NPT	LR	N/A	
2013-2014 L4 - 2.0L (Focus)	See Dealer	N/A	N/A	N/A	N/A	
2011-2014 L4 2.0L Ecoboost	See Dealer	N/A	N/A	N/A	N/A	
1989-92 L4 - 2.2L	3100016	3600006	35 MM	2ND RF	12 o'clock	
1989-92 L4 - 2.2L TURBO	3100017	3600006	35 MM	2ND RF	12 o'clock	
1974-95 L4 - 2.3L OHC (Conventional)	3100039	3600006	1-1/2"	RR or RF	6 or 12 o'clock	
2004-2007 L4 - 2.3L (Duratec) (Transverse)	3100002	3600001	3/4" NPT	LR	N/A	
2008-2014 L4 - 2.5L (Duratec) (Transverse)	3100002	3600001	3/4" NPT	LR	N/A	
1983-95 L4 - 2.3, 2.5L HSC (Transverse)	3100065	3600006	1-3/4"	LR & RR	6 o'clock	
6 Cylinder						
1993-97 V6 - 2.5L	3100028	3600006	35 MM	REAR	8 o'clock	
1995-2012 V6 - 2.5L, 3.0L 24-Valve (Duratec engine)**	3100002	3600001	3/4" NPT	RF	N/A	
2000-2005 V6 - 3.0L 24V (Conventional Duratec engine)**	3100002	3600001	3/4" NPT	RR	N/A	
1972-82 V6 - 2.6, 2.8L	3100036	3600003	1-1/2"	LFF or RFF	4 or 9 o'clock	
1987-90 V6 - 2.9L [Scorpio]	3100042	3600006	1-1/2"	LFF	10 o'clock	
1986-2006 V6 - 3.0L 12-VALVE (Transverse) [Except Villager and SHO]	3100039	3600006	1-1/2"	LF	6 o'clock	
1989-94 V6 - 3.0, 3.2L [SHO]	See Dealer	N/A	N/A	N/A	N/A	
2007-2014 V6 - 3.5L (Transverse)	3100002	3600001	3/4" NPT	RR	N/A	
2009-2014 V6 - 3.5L GTDI Ecoboost	3100002	3600001	3/4" NPT	RR	N/A	
2009-2014 V6 - 3.7L (Transverse)	3100002	3600001	3/4" NPT	RR	N/A	
2010-2014 V6 - 3.7L (Conventional)	See Dealer	N/A	Cartridge	N/A	N/A	
1988-96 V6 - 3.8L (Transverse)	3100040	3600006	1-1/2"	LF	12 o'clock	
1982-2004 V6 - 3.8L (Conventional)	3100040	3600006	1-1/2"	LR or RR	12 o'clock	
2005-2009 V6 - 4.0L (Conventional)	3100040	3600006	38MM	RR	7 o'clock	
1964-83 L6 - 170, 200, 250 cu. in.	3100065	3600006	1-3/4"	RC or RF	6 or 12 o'clock	
1966-72 L6 - 240 cu. in.	3100054	3600006	1-5/8"	2ND RF	12 o'clock	
8 Cylinder						
1963-65 V8 - 221, 260, 289 cu. in.	3100039	3600006	1-1/2"	LR	12 o'clock	
1980-82 V8 - 255 cu. in. (4.2L)	3100039	3600006	1-1/2"	RR	6 o'clock	1
1996-98 V8 - 3.4L [SHO]	3100002	3600001	3/4" NPT	NOT ACCESSIBLE	N/A	5
2000-2005 V8 - 3.9L (Conventional)	3100107	3600005	30 MM	LR	N/A	
1992-2010 V8 - 4.6L (Conventional)	3100040	3600006	1-1/2"	LR	9 o'clock	
1999-00 V8 - 4.6L (Conventional) [Mustang]	3100040	3600006	1-1/2"	RR	9 o'clock	
2001-2009 V8 - 4.6L (Conventional) [Mustang]	3100040	3600006	1-1/2"	LR	9 o'clock	
1995-2004 V8 - 4.6L 32V [Mustang]	3100040	3600006	1-1/2"	LR	9 o'clock	
2003-2004 V8 - 4.6L 32V [Merauder]	3100040	3600006	1-1/2"	LR	9 o'clock	
1995-2002 V8 - 4.6L (Transverse)	3100040	3600006	1-1/2"	LF	9 o'clock	
2011-2014 V8 - 5.0L	3100002	3600001	3/4" NPT	LF	N/A	
2006-2011 V8 - 5.4L (Conventional) [Mustang}	3100040	3600006	1-1/2"	LR	9 o'clock	
1966-96 V8 - 289, 302 cu. in. (5.0L)	3100039	3600006	1-1/2"	LR or RR	6 o'clock	1
1974-88 V8 - 351W, 351C, 351 cu. in. (5.8L)	3100039	3600006	1-1/2"	RR	12 o'clock	
1974-85 V8 - 351M, 400 cu. in.	3100039	3600006	1-1/2"	LR	9 o'clock	
1968-78 V8 - 429, 460 cu. in.	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1968-73 V8 - 351, 400, 429, 460 cu. in.	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1963-71 V8 - 352, 390, 410, 427, 428 cu. in.	3100065	360-0006	1-3/4"	RF	6 or 12 o'clock	
LIGHT & MEDIUM DUTY TRUCKS & VANS - INCLUDES AEROSTAR, EXPLORER & WINSTAR						
4 Cylinder						
1972-82 L4 - 1.8L	3100071	3600006	50 MM	LC	12 o'clock	
1983-88 L4 - 2.0L	3100039	3600006	1-1/2"	RR	6 o'clock	1
1979-82 L4 - 1.8, 2.0L [Courier]	3100016	3600006	35 MM	LF	12 o'clock	
2002-2003 L4 - 2.0L (Zetec engine)*	3100018	3600006	35 MM	RR	3 o'clock	
2010-2011 L4 - 2.0L [Transit]	See Dealer	N/A	N/A	N/A	N/A	
1981-85 L4 - 2.2L DIESEL	3100010	3600005	30 MM	RR	6 o'clock	
1977-94 L4 - 2.3L	3100039	3600006	1-1/2"	RR	6 o'clock	
1985-88 L4 - 2.3L Mitsubishi Diesel TURBO	See Dealer	3600006	40 MM	LR	9 o'clock	
1995-97 L4 - 2.3L	3100084	3600006	1.5"	LR	3 o'clock	
2001-2007 L4 - 2.3L (Conventional)	3100002	3600001	3/4" NPT	RR	N/A	
2004-2012 L4 - 2.3L (Transverse)	3100002	3600001	3/4" NPT	LR	N/A	
1998-00 L4 2.5L	3100084	3600006	1.5"	LR	3 o'clock	
6 Cylinder						
1983-86 V6 - 2.8L	3100036	3600003	1-1/2"	RFF IN HEAD	10 o'clock	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

**** If lower hose casting is not present, purchase from Mercedes (#1122030061). Installation also requires 2 hoses (Mercedes #2105015382 and #1635013482).**

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MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
1986-92 V6 - 2.9L	3100042	3600006	1-1/2"	LFF IN HEAD	10 o'clock	
1993-99 V6 - 3.0L (Transverse) [Villager]	3100009	3600004	30 MM	LF	6 o'clock	
1986-2003 V6 - 3.0L 12-Valve	3100039	3600006	1-1/2"	ANY	6 o'clock	
2001-2011 V6 - 3.0L 24-Valve (Duratec engine)**	3100002	3600001	3/4" NPT	RF	N/A	
1999-00 V6 - 3.3 (Transverse) [Villager]	3100009	3600004	30 MM	LF	6 o'clock	
2011-2012 V6 - 3.5L (Conventional) [Ecoboost]	See Dealer	N/A	Cartridge	N/A	N/A	
2011-2012 V6 - 3.7L (Conventional)	See Dealer	N/A	Cartridge	N/A	N/A	
1992-97 V6 - 3.8L CONV	3100039	3600006	1-1/2"	LR or RR	12 o'clock	
1995-2003 V6 - 3.8L (Transverse)	3100040	3600006	1-1/2"	LF	6 o'clock	
2004-2010 V6 - 3.9L (Transverse)	3100040	3600006	1-1/2"	LF	6 o'clock	
1990-2010 V6 - 4.0L	3100039	3600006	1-1/2"	RF	6 o'clock	
1996-2003 V6 - 4.2L (Conventional)	3100040	3600006	1-1/2"	LR	12 o'clock	
2004-2008 V6 - 4.2L (Transverse)	3100040	3600006	1-1/2"	LF	6 o'clock	
1964-74 L6 - 170, 200, 250 cu. in.	3100065	3600006	1-3/4"	RF	12 o'clock	
1965-97 L6 - 3.9, 4.9L (240, 300 cu. in.)	3100054	3600006	1-5/8"	2ND RF	12 o'clock	9
1986-88 L6 - 6.6, 7.8L DIESEL (See Heavy Duty Application Guide)						
8 Cylinder						
1960-74 V8 - 292, 428 cu. in.	3100065	3600006	1-3/4"	LF or RF	12 o'clock	
1966-99 V8 - 5.0L (302 cu. in.), 289 cu. in.	3100039	3600006	1-1/2"	RR	6 o'clock	
1996-2010 V8 - 4.6L, 5.4L	3100040	3600006	1-1/2"	LR	12 o'clock	
2011 V8 - 5.0L	3100002	3600001	3/4" NPT	LR	N/A	
2000 - 2014 V8 - 5.4L	3100002	3600001	3/4" NPT	LR	N/A	
1966-97 V8 - 5.8L (351 cu. in.), 400 cu. in.	3100039	3600006	1-1/2"	LR or RR	12 o'clock	
1966-97 V8 - 7.5L (460 cu. in.), 429 cu. in.	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1960-80 V8 - 330, 352, 361, 389, 391 cu. in.	3100065	3600006	1-3/4"	RF or 2ND RF	12 o'clock	
1960-79 V8 - 360, 390 cu. in.	3100065	3600006	1-3/4"	LR or 2ND RF	12 o'clock	
1979-86 V8 - 370 cu. in.	3100039	3600006	1-1/2"	LR or RR	12 o'clock	
1960-81 V8 - 401, 475, 477, 534 cu. in.	3100065	3600006	1-3/4"	LR or 2ND RF	12 o'clock	
2003-2006 V8 - 6.0L DIESEL (VT365)	3500069	3600008	27MM	RR	N/A	
2011-2014 V8 - 6.2L	3100002	3600001	3/4" NPT	LR	N/A	
2007-2010 V8 - 6.4L DIESEL	3500069	3600008	27MM	RR	N/A	
2011-2014 V8 - 6.7, 6.8L DIESEL	3500069	3600008	27MM	LR	N/A	
1983-94 V8 - 6.9, 7.3L DIESEL	3100043	3600010	1-1/2"	RR	11 o'clock	
1995-2002 V8 - 7.3L (T444E)	3500043	3600008	3/4 NPT	oil filter	N/A	
10 Cylinder						
1998-2010 V10 - 6.8L	3100040	3600006	1-1/2"	LR or RR	12 o'clock	
GEO						
3 Cylinder						
1989-97 L3 - 1.0L [Metro]	3400002	3600002	CLAMP-ON	N/A	N/A	
4 Cylinder						
1989-99 L4 - 1.3L (Suzuki engine)	3400004	3600020	CLAMP-ON	N/A	N/A	
1989 L4 - 1.5L	3100018	3600006	35 MM	CR	12 o'clock	
1988-97 L4 - 1.6L (Suzuki engine) [Tracker]	3400003	3600002	CLAMP-ON	N/A	N/A	
1990-97 L4 - 1.6, 1.8L (Trans) (Isuzu engine) [Storm]	3100018	3600006	35 MM	2ND RR	12 o'clock	
1985-97 L4 - 1.6, 1.8L (Trans) (Toyota engine) [Prizm]	3100049	3600006	40 MM	CF	12 o'clock	
GMC - SEE CHEVROLET LIGHT & MEDIUM TRUCKS						
HINO - SEE HEAVY DUTY APPLICATION GUIDE						
HONDA						
AUTOMOTIVE						
4 Cylinder						
2002-2004 L4 -1.0L	3100006	3600005	28 MM THD			
1973-83 L4 - 1.2, 1.3L	3400005	3600002	CLAMP-ON	N/A	N/A	
1984-92 L4 - 1.3, 1.5L	3400001	3600002	CLAMP-ON	N/A	N/A	
2003-2014 - 1.3L	3100006	3600005	28 MM THD			
1996-00 L4 - 1.6L (Transverse) 16-Valve	3100006	3600005	28 MM THD	LR	N/A	
1999-00 L4 - 1.6L DOHC [Civic SiR]	3100006	3600005	28 MM THD	RF	N/A	
1988-95 L4 - 1.5L, 1.6L (Transverse) 16-Valve only	3100006	3600005	28 MM THD	RF	N/A	
1976-83 L4 - 1.5, 1.6L	3400006	3600002	CLAMP-ON	N/A	N/A	
2006-2014 L4 - 1.5L [Fit]	See Dealer	N/A	N/A	N/A	N/A	
2011-2014 L4 - 1.5L [CRZ]	See Dealer	N/A	N/A	N/A	N/A	
2001-2005 L4 - 1.7L (Transverse)	3100006	3600005	28 MM THD	LR	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

**** If lower hose casting is not present, purchase from Mercedes (#1122030061). Installation also requires 2 hoses (Mercedes #2105015382 and #1635013482).**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
2006-2011 L4 - 1.8L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2012 L4 - 1.8L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1979-87 L4 - 1.6L, 1.8L, 2.0L (Transverse)	3100023	3600006	35 MM	RS	9 o'clock	
1988-89 L4 - 2.0L (Transverse) [Accord]	3100023	3600006	35 MM	RS	9 o'clock	
2002-2005 - L4 2.0L (Transverse) [Civic SiR]	3100006	3600005	28 MM THD	RR	N/A	
2006-2011 L4 2.0L (Transverse) [Civic SiR]	3100006	3600005	28 MM THD	RR	N/A	
1988-91 L4 - 2.0L, 2.1L (Transverse) [Prelude]	See Dealer	N/A	CLAMP-ON	N/A	N/A	
2000-2009 L4 - 2.0, 2.2L (Conventional) [S2000]	3100006	3600005	28 MM THD	N/A	N/A	
1990-97 L4 - 2.2L (Transverse) [Accord]	3100006	3600005	28 MM THD	LR	N/A	
1992-2001 L4 - 2.2L, 2.3L (Transverse) [Prelude]	3100006	3600005	28 MM THD	RR	N/A	5
1998-2002 L4 - 2.3L [Accord]	3100006	3600005	28 MM THD	LR	N/A	
2003-2014 - 2.4L L4 [Accord]	3100006	3600005	28 MM THD	RR	N/A	
2012 L4 - 2.4L (Transverse) [Civic SIR]	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
1998-2007 V6 - 3.0L [Accord]	3100006	3600005	28 MM THD	LF	N/A	
2008-2014 V6 - 3.5L [Accord]	3100006	3600005	28 MM THD	LF	N/A	
1995-97 V6 - 2.7L [Accord]	See Dealer	N/A	N/A	CR	N/A	
LIGHT TRUCK						
4 Cylinder						
1997-2001 L4 - 2.0L CRV	3100006	3600005	28 MM THD	RF	N/A	
1995-98 -2.2L L4 ODYSSEY (Transverse)	3100006	3600005	28 MM THD	LR	N/A	
2002-2014 - 2.4L L4 [CRV]	3100006	3600005	28 MM THD	RR	N/A	
6 Cylinder						
1994-99 V6 - 3.2L [Passport]	3100005	3600005	28 MM THD	LR	N/A	
1999-2014 V6 - 3.5L [Odyssey, Pilot, Ridgeline]	3100006	3600005	28 MM THD	LF	N/A	
HUMMER						
5 Cylinder						
2005-2006 L5 - 3.5L [H3]	3100109	3600082	28 MM THD	LC	N/A	15
2007-2009 L5 - 3.7L [H3]	3100109	3600082	28 MM THD	LC	N/A	15
8 Cylinder						
2007-2009 V8 - 5.3L	3100109	3600082	28 MM THD	LR	N/A	15
2003-2004 V8 - 6.0L [H2]	3100005	3600005	28 MM THD	LR	N/A	
2005-2009 V8 - 6.0L [H2]	3100109	3600082	28 MM THD	LR	N/A	15
HYUNDAI						
4 Cylinder						
1995-97 L4 - 1.5L [Accent]	3100098	3600006	35 MM	2ND LR	9 o'clock	
1998-99 L4 - 1.5L [Accent]	3100098	3600006	35 MM	CR	4 o'clock	
2000-2005 L4 - 1.5L [Accent]	3100098	3600006	35 MM	RF	9 o'clock	
2006-2011 L4 - 1.6L [Accent]	3100114	3600006	35MM	LF	12 o'clock	
2012 L4 - 1.6L [Accent, Velostar]	See Dealer	N/A	Cartridge	RF	N/A	
1983-87 L4 - 1.4, 1.6L (Conventional)	3100098	3600006	35 MM	LC	12 o'clock	
1986-95 L4 - 1.5L (Mitsubishi engine) [Excel]	3100098	3600006	35 MM	2ND LR	7 or 9 o'clock	
1993-95 L4 - 1.5, 1.5L (Alpha engine) TURBO	3100098	3600006	35 MM	2ND LR	7 - 8 o'clock	
1985-86 L4 - 1.6L	3100098	3600006	35 MM	LC	7 - 11 o'clock	
2001-2005 L4 - 1.6L [Accent]	3100098	3600006	35 MM	2nd RR		
1992-99 L4 - 1.6, 1.8L (Transverse)	3100098	3600006	35 MM	2ND RR	3 o'clock	
2012-2014 L4 - 1.8L [Elantra]	See Dealer	N/A	Cartridge	RF	N/A	
1986-88 L4 - 2.0L (Conventional)	3100098	3600006	35 MM	2ND LF	9 o'clock	
2009-2012 L4 - 2.0L Turbo (Conventional)	3100111	3600083	Cartridge	RR	N/A	
2011-2014 L4 - 2.0L Turbo (Transverse) (Theta 2)	See Dealer	N/A	Cartridge	RF	N/A	
1989-2005 L4 - 2.0, 2.4L (Transverse)	3100098	3600006	35 MM	2ND RR	9 o'clock	
1999 L4 - 2.4L (Transverse)	3100098	3600006	35 MM	LR	N/A	
2006-2010 L4 - 2.4L (Transverse)	3100111	3600083	Cartridge	LF	N/A	
2010-2014 L4 - 2.4L (Transverse) (Theta 2)	See Dealer	N/A	Cartridge	LF	N/A	
6 Cylinder						
1989-98 V6 - 3.0L	3100055	3600006	1-5/8"	RF	12 o'clock	
1999-2001 V6 - 2.5L	3100098	3600006	35 MM	LR	6 o'clock	
2002-2005 V6 - 2.7L [Sonata, Tiburon]	3100098	3600006	35 MM	LR	6 o'clock	
2001 V6 - 3.0L [XG300]	3100055	3600006	1-5/8"	LR	12 o'clock	
2006-2011 V6 - 3.3L	3100113	3600083	25 MM THD	CR	N/A	
2002-2005 V6 - 3.5L [XG350]	3100055	3600006	1-5/8"	LR	12 o'clock	
2009-2014 V6 - 3.8L	See Dealer	N/A	Cartridge	RR	N/A	
8 Cylinder						
2009-2011 V8 - 4.6L	See Dealer	N/A	Cartridge	RR	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
LIGHT TRUCK						
4 Cylinder						
2011-2014 L4 - 2.0L (Transverse)	See Dealer	N/A	Cartridge	LF	N/A	
2011-2014 L4 - 2.4L (Transverse)	See Dealer	N/A	Cartridge	LF	N/A	
6 Cylinder						
2001-2005 V6 - 2.7L	3100098	3600006	35 MM	LR	6 o'clock	
2004-2005 V6 - 3.5L	3100055	3600006	1-5/8"	LR	12 o'clock	
2006-2008 V6 - 3.8L	3100113	3600083	25 MM THD	CR	N/A	
20010-2012 V6 - 3.5L (Transverse)	See Dealer	N/A	Cartridge	RR	N/A	
2009-2012 V6 - 3.8L	See Dealer	N/A	Cartridge	RR	N/A	
INFINITI						
4 Cylinder						
1991-2002 L4 - 2.0L	3100007	3600005	30 MM THD	LR	N/A	
6 Cylinder						
1992-97 V6 - 3.0L	3100009	3600004	30 MM	LF or LR	6 o'clock	
1996-2001 V6 - 3.0L (VQ30DE)	3100007	3600005	30 MM THD	RF	N/A	
2002-2013 V6 - 3.5L (VQ35DE) (Transverse)	3100007	3600005	30 MM	RF	N/A	
2003-2013 V6 - 3.5L (VQ35DE, VQ35HR) (Conventional)	3100007	3600005	30 MM	LR	N/A	16
2007-2014 V6 - 3.7L (VQ37VHR) (Conventional)	3100007	3600005	30 MM	LR	N/A	16
8 Cylinder						
1990-96 V8 - 4.5L	3100007	3600005	30 MM THD	REAR	N/A	
1997-00 V8 - 4.1L	3100007	3600005	30 MM THD	REAR	N/A	
2001-2009 V8 - 4.5L	3100007	3600005	30 MM THD	REAR	N/A	
2011-2013 V8 - 5.6L	3100007	3600005	30 MM THD	RF	N/A	
LIGHT TRUCK						
6 Cylinder						
1998-2000 V6 - 3.3L (VG33)	3100009	3600004	30 MM	LR	6 o'clock	
2001-2004 V6 - 3.5L	3100007	3600005	30 MM THD	LF	N/A	
2005-2008 V6 - 4.0L (VQ40DE)	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
2004 V8 - 4.5L	3100007	3600005	30 MM THD	REAR	N/A	
2004-2013 V8 - 5.6L (VK56DE)	3100007	3600005	30 MM THD	RF	N/A	
INTERNATIONAL BY NAVISTAR - LIGHT & MEDIUM DUTY TRUCKS (ALSO SEE HEAVY DUTY APPLICATION GUIDE)						
4 Cylinder						
ALL L4 - 152, 196 cu. in.	3100054	3600006	1-5/8"	RC or RF	12 o'clock	
6 Cylinder						
ALL L6 - 225 cu. in.	3100054	3600006	1-5/8"	LF	12 o'clock	
ALL L6 - 220, 240, 241, 264 , 265 (Black Diamond)	3100054	3600006	1-5/8"	LF	12 o'clock	
ALL L6 - 3.2L [SD-33] (Nissan DIESEL)	3100023	3600006	35 MM	2ND or 4TH LS	12 o'clock	
8 Cylinder						
ALL V8 - 401, 461, 462, 478, 549, 550	3100038	3600006	1-1/2"	ANY LS or RS	12 o'clock	
ALL V8 - 401 cu. in. (AMC)	3100039	3600006	1-1/2"	RR	5 o'clock	
ALL V8 - 404, 446, 485, 537 cu. in., 9.0L	3100044	3600006	1-1/2"	ANY LS or RS	12 o'clock	
ALL V8 to 93 - 6.9, 7.3L DIESEL	3100043	3600010	1-1/2"	RR	11 o'clock	
94-2002 V8 - 7.3L (T444E)	3500043	3600008	3/4 NPT	oil cooler	N/A	
ALL V8 - 266, 304, 345, 392, 400 cu. in.	3100054	3600006	1-5/8"	LF or RF	12 o'clock	
ISUZU						
AUTOMOTIVE						
4 Cylinder						
1992-93 L4 - 1.6, 1.8L	3100018	3600006	35 MM	2ND RR	12 o'clock	
1985-89 L4 - 1.5L (Transverse)	3100018	3600006	35 MM	CR	12 o'clock	
1981-88 L4 - 1.8L, 1.9L	3100018	3600006	35 MM	LF	12 o'clock	
1981-85 L4 - 1.8L DIESEL	3100018	3600006	35 MM	RR	12 o'clock	
LIGHT & MEDIUM TRUCKS						
4 Cylinder						
1998-2002 L4 - 2.2L	3100081	3600006	42 MM	LR	9 o'clock	
1985-95 L4 - 2.3L	3100019	3600006	35 MM	RF	3 o'clock	
1982-89 L4 - 1.8L, 1.9L	3100018	3600006	35 MM	LF	12 o'clock	
1982-86 L4 - 2.2L DIESEL	3100068	3600006	1-3/4"	LF	6 o'clock	
1988-95 L4 - 2.6L	3100098	3600006	35 MM	RF	6 o'clock	
2007-2008 L4 - 2.9L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	15
ALL L4 - 4BD1 engine	3100089	3600006	1" NPT	LR	N/A	
5 Cylinder						
2007-2008 L5 - 3.7L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	15

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
6 Cylinder						
1989-93 V6 - 2.8, 3.1L	3100014	3600006	34 MM	RFF IN BLOCK	3 o'clock	6
1992-2003 V6 - 3.2L	3100005	3600005	28 MM THD	LR	N/A	
1998-99 V6 - 3.5L	3100005	3600005	28 MM THD	LR	N/A	
2003-2005 L6 - 4.2L	3100005	3600005	28 MM THD	LF	N/A	
2006-2007 L6 - 4.2L	See Dealer	N/A	N/A	N/A	N/A	15
ALL L6 - 5.8L, 6.5L (6BD1,6BG1 engine)	3100089	3600006	1" NPT	LR	N/A	
ALL L6 - 6SA1 Engine	3100089	3600006	1" NPT	RS	2 Required	
8 Cylinder						
2003-2005 V8 - 5.3L	3100005	3600100	28 MM THD	LR	N/A	
2006-2007 V8 - 5.3L	3100109	3600082	28 MM THD	LR	N/A	15
JAGUAR						
6 Cylinder						
1952-88 L6 - 2.5, 3.4, 3.6, 3.8, 4.2L	3100003	3600001	1" NPT	N/A	N/A	
2000-2007 V6 - 3.0L	3100002	3600001	3/4" NPT	RR	N/A	
2002-2008 V6 - 2.5, 3.0L (Transverse)	3100002	3600001	3/4" NPT	RF	N/A	
8 Cylinder						
1998-2009 V8 - 4.0, 4.2L	See Dealer	N/A	30 MM THD	LR	N/A	
2010-2014 V8 - 5.0L	See Dealer	N/A	30 MM THD	LR	N/A	
12 Cylinder						
1971-97 V12 - 5.3, 6.0L	3100003	3600001	1" NPT	N/A	N/A	
JEEP						
4 Cylinder						
1984-87 L4 - 2.1L DIESEL	3100003	3600001	1" NPT	RF	N/A	
2002-2004 L4 2.4L	3100024	3600006	35 MM	RR/2ND RR	3 o'clock	
2007-2014 L4 - 2.4L [Compass, Patriot]	3100111	3600083	Cartridge	LF	N/A	
1980-83 L4 - 2.5L (Pontiac engine)	3100054	3600006	1-5/8"	LR	12 o'clock	
1984-2002 L4 - 2.5L	3100065	3600006	1-3/4"	LR	11 o'clock	
6 Cylinder						
1984-87 V6 - 2.8L (Chevrolet engine)	3100014	3600006	34 MM	RFF IN BLOCK	3 o'clock	
2007-2009 V6 - 3.0L DIESEL	See Dealer	N/A	N/A	N/A	N/A	
1963-71 L6 - 230 cu. in. (OHC)	3100057	360-0006	1-5/8"	ANY LS	6 o'clock	
2002-2012 V6 - 3.7L	3100104	3600006	35mm	2nd RR	N/A	
1965-71 L6 - 225 cu. in.	3100039	3600006	1-1/2"	LR	2 o'clock	
2011-2014 V6 - 3.6L Pentastar	See Dealer	N/A	N/A	RR	N/A	
2007-2010 V6 - 3.8L	See Dealer	N/A	N/A	N/A	N/A	
1987-2006 L6 - 4.0L	3100072	3600006	2"	LF	12 o'clock	
1968-90 L6 - 4.2L	3100072	3600006	2"	LR	12 o'clock	
8 Cylinder						
1968-71 V8 - 350 cu. in. (Buick engine)	3100039	3600006	1-1/2"	LF or RR	12 o'clock	
1972-91 V8 - 304, 360, 401 cu. in.	3100039	3600006	1-1/2"	LR	5 o'clock	
1999-2007 V8 4.7L	3100104	3600006	35mm	RR	N/A	
1993-98 V8 - 5.2L	3100055	3600006	1-5/8"	RR	6 o'clock	
2005-2014 V8 - 5.7L HEMI	See Dealer	N/A	Cartridge	LR	N/A	
1998 V8 - 5.9L	3100055	3600006	1-5/8"	RR	6 o'clock	
2006-2010 V8 - 6.1L HEMI	See Dealer	N/A	Cartridge	LR	N/A	
2012 - 2014 V8 - 6.4L HEMI	See Dealer	N/A	Cartridge	LR	N/A	
KIA						
4 Cylinder						
2001-2002 L4 1.5L [Rio]	See Dealer	3600006	35MM	N/A	N/A	
2003-2004 L4 1.6L [Rio]	See Dealer	3600006	35MM	N/A	N/A	
2006-2010 L4 1.6L [Rio]	3100114	3600006	35MM	LF	12 o'clock	
2009-2011 L4 1.6L [Soul]	See Dealer	N/A	Cartridge	RR	N/A	
2012 L4 1.6L GDI [Rio, Soul]	See Dealer	N/A	Cartridge	RR	N/A	
1998-2003 L4 - 1.8L [Sephia, Spectra]	3100016	3600006	35 MM	RF	12 o'clock	
1995-2003 L4 - 2.0L [Sportage]	3100016	3600006	35 MM	2nd LF	12 o'clock	
2004-2006 L4 - 2.0L [Spectra, Sportage]	3100098	3600006	35 MM	2nd RR	9 o'clock	
2009-2014 L4 2.0L [Forte]	3100111	3600083	Cartridge	LF	N/A	
2012-2014 L4 - 2.0L Turbo	See Dealer	N/A	Cartridge	RR	N/A	
2002-2006 L4 - 2.4L (Transverse)	3100098	3600006	35 MM	LR	6 o'clock	
2006-2014 L4 - 2.4L (Transverse) [Optima, Magentis, Forte]	3100111	3600083	Cartridge	LF	N/A	
2011-2014 L4 - 2.4L GDI	See Dealer	N/A	Cartridge	RR	N/A	
6 Cylinder						
2001 V6 - 2.5L [Magentis]	3100098	3600006	35 MM	LR	6 o'clock	

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
2002-2005 V6 - 2.7L [Magentis, Sportage]	3100098	3600006	35 MM	LR	6 o'clock	
2007-2009 V6 - 3.3L [Sorento]	3100113	3600083	25 MM THD	RR	N/A	
2002-2005 V6 - 3.5L [Sedona]	3100055	3600006	1-5/8"	LR	12 o'clock	
2004-2006 V6 - 3.5L [Amanti]	3100055	3600006	1-5/8"	LR	12 o'clock	
2003-2005 V6 - 3.5L [Sorento]	3100055	3600006	1 5/8"	RR	12 o'clock	
2010-2014 V6 - 3.5L [Sorento, Sedona]	See Dealer	N/A	Cartridge	LR	N/A	
2006-2009 V6 - 3.8L [Sedona]	3100113	3600083	25 MM THD	CR	N/A	
2007-2009 V6 - 3.8L [Amanti]	3100113	3600083	25 MM THD	CR	N/A	
2009-2012 V6 - 3.8L [Borrego]	See Dealer	N/A	Cartridge	RR	N/A	
2010-2010 V6 - 3.8L [Sedona]	3100111	3600083	Cartridge	LR	N/A	
8 Cylinder						
2009-2011 V8 - 4.6L [Borrego]	3100113	3600083	25 MM THD	LR	N/A	
LADA						
1978-93 L4 - 1.5L	3100050	3600006	40 MM	LF	9 o'clock	
1981-93 L4 - 1.6L	3100050	3600006	40 MM	LS	9 o'clock	
1987-93 L4 - 1.3, 1.5L (Transverse)	3100032	3600006	36 MM	LF	3 o'clock	
LEXUS						
4 Cylinder						
2012 L4 -1.8L	See Dealer	N/A	N/A	N/A	N/A	
2011-2012 L4 -2.4L	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
2001-2005 L6 - 3.0L	See Dealer	N/A	N/A	N/A	N/A	
1989-91 V6 - 2.5L	3100019	3600006	35 MM	CF	6 o'clock	
2006-2014 V6 - 2.5L (4GR-FSE)(Conventional)	See Dealer	N/A	N/A	LR	N/A	
1992-94 V6 - 3.0L (3VZ-FE)	3100021	3600006	35 MM	LF	3 o'clock	
1994-2003 V6 - 3.0L (1MV-FE)	3100029	3600006	35 MM	RF	3 o'clock	
1992-96 L6 - 3.0L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	
2004-2006 V6 - 3.3L (3MZ-FE)	3100029	3600006	35 MM	RF	3 o'clock	
2007-2014 V6 - 3.5L (2GR-FE)(Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2006-2014 V6 - 3.5L (2GR-FSE)(Conventional)	See Dealer	N/A	N/A	LR	N/A	
8 Cylinder						
1989-2001 V8 - 4.0L	See Dealer	N/A	N/A	N/A	N/A	
2002-2007 V8 - 4.3L (3UZ-FE)	3100029	3600006	35 MM	RF	ANY	
2007-2014 V8 - 4.6L (1URFS, 1UR-FSE, 2UR-FSXE)	See Dealer	N/A	N/A	N/A	N/A	
2008-2014 V8 - 5.0L (2UR-FSE)	See Dealer	N/A	N/A	N/A	N/A	
2008-2014 V8 - 5.0L (2UR-GSE) [IS-F]	See Dealer	N/A	N/A	N/A	N/A	
LIGHT TRUCKS						
6 Cylinder						
1999-2003 V6 - 3.0L	3100029	3600006	35 MM	RF	3 o'clock	
2004-2006 V6 - 3.3L (3MZ-FE)	3100029	3600006	35 MM	RF	3 o'clock	
2007-2014 V6 - 3.5L (2GR-FE)(Transverse)	See Dealer	N/A	N/A	LF	N/A	
8 Cylinder						
2010-2014 V8 - 4.6L	See Dealer	N/A	35 MM	RF	N/A	
1998-2009 V8 4.7L (2UZ-FE)	See Dealer	N/A	35 MM	RF	N/A	
2008-2014 V8 - 5.7L (2UR-FE)	3100129	3600083	Cartridge	LR	N/A	
10 Cylinder						
2010-2013 V10 4.8L	See Dealer	N/A	N/A	N/A	N/A	
MAZDA						
AUTOMOTIVE						
Rotary						
1971-96 R2 - ALL	See Dealer	3600002	CLAMP-ON	N/A	N/A	
2004-2011 R2 [RX8]	See Dealer	N/A	N/A	N/A	N/A	
4 Cylinder						
1971-80 L4 - 1.2L (Conventional)	3400008	3600001	CLAMP-ON	N/A	N/A	
1975-80 L4 - 1.3L, 1.4L, 1.5L (Conventional)	3100016	3600006	35 MM	LF	6 o'clock	
1981-82 L4 - 1.5L	3400009	3600002	CLAMP-ON	N/A	N/A	
1981-85 L4 - 1.5L (Transverse)	3100019	3600006	35 MM	LF	3 o'clock	
1995-98 L4 - 1.5L	3100023	3600006	35 MM	2ND RF	6 or 12 o'clock	
1986-89 L4 - 1.6L (Transverse) (Except TURBO)	3100016	3600006	35 MM	2ND RF	12 o'clock	
1988-89 L4 - 1.6L (Transverse) DOHC TURBO	3100017	3600006	35 MM	2ND RF	12 o'clock	
1990-98 L4 - 1.6L (Transverse)	3100023	3600006	35 MM	2ND RF	9 o'clock	
1989-95 L4 - 1.6L DOHC (Conventional)	3100016	3600006	35 MM	2ND LF	12 o'clock	
1970-80 L4 - 1.6L, 1.8L (Conventional)	3100071	3600006	50 MM	LC	12 o'clock	
1999 L4 1.6L L4 DOHC (Transverse)	See Dealer	N/A	N/A	N/A	N/A	

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
2010-2012 L4 1.6L (Transverse) [Mazda 2]	See Dealer	N/A	35MM	LR	N/A	
1990-98 L4 - 1.8L SOHC	3100021	3600006	35 MM	2ND RF	6 o'clock	
1995-99 L4 - 1.8L DOHC	3100016	3600006	35 MM	2ND RF	12 o'clock	
1999-00 L4 1.8L DOHC (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1985-87 L4 - 2.0L DIESEL	3100016	360 0006	35 MM	2ND RF	12 o'clock	
1983-92 L4 - 2.0L [626] (Transverse)	3100016	360 0006	35 MM	2ND RF	9 o'clock	
1979-82 L4 - 2.0L (Conventional)	3100071	360 0006	50 MM	LC	12 o'clock	
1993-98 L4 - 2.0L	3100023	360 0006	35 MM	RR	8 o'clock	
1998-2003 L4 - 2.0L DOHC [626, Ptotege]	See Dealer	N/A	35MM	RR	N/A	
2003-2004 L4 - 2.0L DOHC Turbo	See Dealer	N/A	35MM	RR	N/A	
2004-2011 L4 - 2.0L [Mazda 3]	3100002	360 0001	3/4" NPT	LR	N/A	
2012-2014 L4 - 2.0L Skyactiv [Mazda 3}	3100002	360 0001	3/4" NPT	LR	N/A	
2006-2007 L4 - 2.0L [Mazda MX5]	3100002	360 0001	3/4" NPT	RR	N/A	
1988-92 L4 - 2.2L [626] (Transverse)	3100016	360 0006	35 MM	2ND RF	12 o'clock	
1988-92 L4 - 2.2L TURBO	3100017	360 0006	35 MM	2ND RF	12 o'clock	
2003-2009 L4 - 2.3L [Mazda 3, Mazda 5, Mazda 6]	3100002	360 0001	3/4" NPT	LR	N/A	
2006-2012 L4 - 2.3L Turbo	3100002	360 0001	3/4" NPT	LR	N/A	
2009-2014 L4 2.5L [Mazda 3, Mazda 6]	3100002	360 0001	3/4" NPT	LR	N/A	
6 Cylinder						
1992-99 V6 - 1.8L, 2.5L (Transverse)	3100028	360 0006	35 MM	REAR	8 o'clock	
1995-2002 V6 - 2.5L, 2.3L (Miller cycle engine)	3100028	360 0006	35 MM	REAR	1 o'clock	
1988-97 V6 - 3.0L	3100016	360 0006	35 MM	RF	6 o'clock	
2003-2008 V6 - 3.0L [Mazda 6]	3100002	360 0001	3/4" NPT	RF	N/A	
2009-2013 V6 - 3.7L [Mazda 6]	3100002	360 0001	3/4" NPT	RR	N/A	
LIGHT & MEDIUM DUTY TRUCKS						
4 Cylinder						
1971-77 L4 - 1.6L	3100071	360 0006	50 MM	LC	6 o'clock	
1977-84 L4 - 1.8L, 2.0L	3100071	360 0006	50 MM	LC	12 o'clock	
1985-93 L4 - 2.0L, 2.2L GAS	3100016	360 0006	35 MM	2ND LF	12 o'clock	
2001-2003 L4 - 2.0L [Tribute] (Ford engine)	3100018	360 0006	35 MM	RR	3 o'clock	
2012-2014 L4 - 2.0L Skyactiv [CX-5]	3100002	360 0001	3/4" NPT	LR	N/A	
1982-87 L4 - 2.2L DIESEL	3100023	360 0006	35 MM	2ND RF	3 or 9 o'clock	
2001-2011 L4 - 2.3L [B2300]	3100002	360 0001	3/4" NPT	RR	N/A	
1994 L4 - 2.3L [B2300] (Ford engine)	3100039	360 0006	1-1/2"	RR	12 o'clock	
1995-97 L4 - 2.3L [B2300] (Ford engine)	3100084	360 0006	1-1/2"	LR	3 o'clock	
2004-2008 L4 - 2.3L [Tribute]	3100002	360 0001	3/4" NPT	LR	N/A	
2006-2010 L4 - 2.3L Turbo [CX-7]	3100002	360 0001	3/4" NPT	LR	N/A	
1998-00 L4 - 2.5L (Ford engine)	3100084	360 0006	1.5 IN	LR	3 o'clock	
2009-2012 L4 - 2.5L [Tribute]	3100002	360 0001	3/4" NPT	LR	N/A	
1989-95 L4 - 2.6L [B2600] & MPV (Mazda engine)	3100075	360 0006	35 MM	2ND LF	9 o'clock	
1987-88 L4 - 2.6L [B2600] (Mitsubishi engine)	3100049	360 0006	40 MM	RF	6 o'clock	
6 Cylinder						
2000-2001 V6 - 2.5L [MPV](Ford engine)	3100002	360 0001	3/4" NPT	RF	N/A	
1989-93 V6 - 3.0L	3100016	360 0006	35 MM	RF	6 o'clock	
2001-2012 V6 - 3.0L [Tribute] (Ford engine)	3100002	360 0001	3/4" NPT	RF	N/A	
2002-2011 V6 - 3.0L [MPV] (Ford engine)	3100002	360 0001	3/4" NPT	RF	N/A	
1994-2011 V6 - 3.0L [B3000] (Ford engine)	3100039	360 0006	1-1/2"	RR	12 o'clock	
2007-2008 V6 - 3.5L [CX-9]	3100002	360 0001	3/4" NPT	RR	N/A	
2008-2014 V6 - 3.7L (Transverse)	3100002	360 0001	3/4" NPT	RR	N/A	
1991-2011 V6 - 4.0L [B4000] (Ford engine)	3100039	360 0006	1-1/2"	RF	6 o'clock	
MERCEDES-BENZ						
4 Cylinder						
ALL 230	3100105	N/A	38 MM THD	SEE INSTRUCTIONS	N/A	
ALL DIESEL-Except 190D (1984 & newer)	3100105	N/A	38 MM THD	SEE INSTRUCTIONS	N/A	
1994-2004 L4 - 1.8L, 2.0L, 2.3L (M111)	3100105	N/A	38 MM THD	SEE INSTRUCTIONS	N/A	
2001-2007 L4 - 1.8L (M271)	8604967	N/A	3/4" NPT	RF	N/A	
2012 L4 - 1.8L TURBO	See Dealer	N/A	N/A	N/A	N/A	
2006-2012 L4 - 2.0L [B Class]	See Dealer	N/A	N/A	N/A	N/A	
5 Cylinder						
ALL DIESEL	3100105	N/A	38 MM THD	SEE INSTRUCTIONS	N/A	
6 Cylinder						
1998-2005 V6 - 2.6L, 3.2L, 3.7L (M112)	3100105	N/A	38 MM THD	Lower hose casting	N/A	
2004-2011 V6 - 2.5L, 3.0L, 3.5L (M272)	3100105	N/A	38 MM THD	Lower hose casting	N/A	
2012 - 2014 V6 - 3.5L (M276)	See Dealer	N/A	N/A	N/A	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
2007-2012 V6 - 3.2L DIESEL	3100105	N/A	38 MM THD	Lower hose casting	N/A	
8 Cylinder						
ALL V8 1971-2000	3100105	N/A	38 MM THD	SEE INSTRUCTIONS	N/A	
2001-2007 V8 - 4.3L, 5.0L, 5.4L (M113)	3100105	N/A	38 MM THD	Lower hose casting	N/A	
2006-2009 V8 - 4.7L, 5.0L (M273)	3100105	N/A	38 MM THD	Lower hose casting	N/A	
2011-2014 V8 - 4.7L Turbo	See Dealer	N/A	N/A	N/A	N/A	
2004-2009 V8 - 5.4L (M155) [SLR McLaren]	See Dealer	N/A	N/A	N/A	N/A	
2011-2014 V8 5.5L Turbo	See Dealer	N/A	N/A	N/A	N/A	
2006-2012 V8 - 6.2L AMG (M156)	See Dealer	N/A	N/A	N/A	N/A	
12 Cylinder						
2001-2005 V12 - 5.8L (M137)	3100105	N/A	38 MM THD	Lower hose casting	N/A	
2002-2014 V12 - 5.5L, 6.0L Turbo (M275/285)	3100105	N/A	38 MM THD	Lower hose casting	N/A	
1989-2008 V12 - 7.3L AMG (M120)	See Dealer	N/A	N/A	N/A	N/A	
MINI						
4 Cylinder						
2003-2006 L4 1.6L	See Dealer	N/A	N/A	N/A	N/A	
2007-2014 L4 - 1.6L	See Dealer	N/A	N/A	N/A	N/A	
MITSUBISHI						
AUTOMOTIVE						
4 Cylinder						
1985-93 L4 - 1.5L [Precis]	3100024	3600006	35 MM	2ND LR	9 o'clock	
1987-2001 L4 - 1.5L (G15B) [Mirage]	3100024	3600006	35 MM	2ND LR	9 o'clock	
1989-92 L4 - 1.6L (4G61)	3100024	3600006	35 MM	2ND RR	4 o'clock	
1993-99 L4 - 1.8L (4G93) [Expo/Mirage]	3100024	3600006	35 MM	RF	3 o'clock	
1989-94 L4 - 1.8L (4G37) [Eclipse]	3100024	3600006	35 MM	RF	12 o'clock	
1989-96 L4 - 2.0L (4G63) [Eclipse]	See Dealer	N/A	N/A	N/A	N/A	
1989-93 L4 - 2.0L (4G63) [Galant]	3100024	3600006	35 MM	LR	3 o'clock	
1995-99 L4 - 2.0L (420A) [Eclipse non-turbo]	3100024	3600006	35 MM	2ND LR	9 o'clock	
2004-2006 L4 - 2.0L [Lancer]	3100075	3600006	35 MM	2ND LF	3 o'clock	
2004-2006 L4 - 2.0L [Lancer Evo VIII]	See Dealer	N/A	N/A	N/A	N/A	
2007-2014 L4 - 2.0L [Lancer]	3100111	3600083	Cartridge	LF	N/A	
2008-2014 L4 - 2.0L Turbo [Lancer Evo]	3100111	3600083	Cartridge	LF	N/A	
1982-96 L4 - 2.4L (4G64) [Expo/Expo LRV]	3100024	3600006	35 MM	LR/2ND LR	3 o'clock	
1992 L4 - 2.4L (4G64) [Galant DOHC]	3100024	3600006	35 MM	RF	3 o'clock	
1994-98 L4 - 2.4L (4G64) [Galant SOHC]	3100024	3600006	35 MM	RF	3 o'clock	
1999-2008 L4 - 2.4L (4G64) [Galant, 00 Eclipse]	3100020	3600006	35 MM	2ND LF	4 o'clock	
1996-99 L4 - 2.4L (4G64) [Eclipse Spyder]	3100024	3600006	35 MM	RF	3 o'clock	
2004-2007 L4 - 2.4L (JT41/45 4 MIVEC)[Galant, Lancer]	3100075	3600006	35 MM	LF	3 o'clock	
2008-2014 L4 - 2.4L [Lancer GTS]	3100111	3600083	Cartridge	LF	N/A	
6 Cylinder						
1995-96 V6 - 2.5L (6G73) [Galant]	3100055	3600006	1-5/8"	CR	3 o'clock	
1988-96 V6 - 3.0L (6G72) [Except 3000GT]	3100055	3600006	1-5/8"	RF	9 o'clock	
1991-96 V6 - 3.0L (6G72) [3000GT]	See Dealer	N/A	N/A	N/A	N/A	
1999-2003 V6 - 3.0L (6G72) [Galant, 00 Eclipse]	3100055	3600006	1-5/8"	LR	9 o'clock	
1997-2007 V6 - 3.5L (6G74) [Diamante]	3100055	3600006	1-5/8"	LR	6 o'clock	
2004-2012 V6 - 3.8L [Galant]	3100055	3600006	1-5/8"	LR	12 o'clock	
LIGHT & MEDIUM DUTY TRUCKS						
4 Cylinder						
1983-89 L4 - 2.0L (G63B)	3100024	3600006	35 MM	RR	3 o'clock	
1983-86 L4 - 2.3L (4D55) DIESEL	See Dealer	3600006	40 MM	LR	9 o'clock	
1987-90 L4 - 2.4L (G64B)	3100024	3600006	35 MM	RR	3 o'clock	
1990-96 L4 - 2.4L (4G64)	3100024	3600006	35 MM	RR	3 o'clock	
2003-2007 L4 - 2.4L (4G64) [Outlander]	3100024	3600006	35 MM	2nd LF	3 o'clock	
2008-2014 L4 - 2.4L [Outlander]	3100111	3600083	Cartridge	LF	N/A	
1997-2009 L4 - 2.4L (4G64) [Montero Sport]	3100024	3600006	35 MM	LF	3 o'clock	
1983-89 L4 - 2.6L (G54B)	See Dealer	3600006	40 MM	RF	6 o'clock	
6 Cylinder						
1990-2005 V6 - 3.0L (6G72) [Truck,Montero]	3100055	3600006	1-5/8"	RR	9 o'clock	
2007-2008 V6 - 3.0L (6B31) [Outlander]	See Dealer	3600006	40 MM	RF	6 o'clock	
1997-2005 V6 - 3.0L (6G72) [Montero Sport]	3100055	3600006	1-5/8"	RC	6 o'clock	
2008-2012 V6 - 3.5L [Outlander]	3100007	3600005	30MM	CR	N/A	
1999-2002 V6 - 3.5L (6G74) [Montero Sport]	3100055	3600006	1-5/8"	RC	6 o'clock	
1995-2002 V6 - 3.5L (6G74) [Montero]	3100055	3600006	1-5/8"	RR	12 o'clock	
2003-2011 V6 - 3.8L	3100055	3600006	1-5/8"	RR	12 o'clock	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

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MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
NISSAN						
AUTOMOTIVE						
4 Cylinder						
1966-80 L4 - 1.0, 1.2, 1.3, 1.4, 1.6L OHV (Conv)	3100016	3600006	35 MM	LF	12 o'clock	
1972-82 L4 - 1.2, 1.4, 1.5L OHC (Conventional)	3100016	3600006	35 MM	LF	12 o'clock	
1968-73 L4 - 1.3, 1.6L OHC (Conventional)	3100048	3600006	40 MM	LF or RR	12 o'clock	
1976-81 L4 - 1.4L (A14), 1.5L (A15) (Transverse)	3100016	3600006	35 MM	LR	12 o'clock	
1982-88 L4 - 1.5L (E15), 1.6L (E16) (Transverse)	3100074	3600004	30 MM	RR	8 o'clock	
1989-90 L4 - 1.6L (GA16i) (Transverse)	3100074	3600004	30 MM	RF	9 o'clock	
1991-92 L4 - 1.6L (E16) (Transverse)	3100074	3600004	30 MM	RR	8 o'clock	
1991-99 L4 - 1.6L (GA16DE) (Transverse)	3100074	3600004	30 MM	RF	9 o'clock	
1987-89 L4 - 1.6L (CA16DE), 1.8L (CA18DE) (Trans)	3100074	3600004	30 MM	LF	4 o'clock	
2011-2014 L4 - 1.6L (MR16DDT) (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1983-87 L4 - 1.7L (CD17) (Transverse) DIESEL	3100074	3600004	30 MM	RR	8 o'clock	
1984-88 L4 - 1.8L (CA18ET) (Conventional) TURBO	3100074	3600004	30 MM	RC	3 o'clock	1
1973-80 L4 - 1.8L (L18), 2.0L (L20) (Conventional)	3100048	3600006	40 MM	3RD RS	12 o'clock	
2002-2006 L4 - 1.8L (QG18DE)	See Dealer	N/A	N/A	N/A	N/A	
2007-2014 L4 - 1.8L (MR20DE)	See Dealer	N/A	N/A	N/A	N/A	
1986-88 L4 - 2.0L (CA20) (Conventional)	3100074	3600004	30 MM	LR	6 o'clock	
1982-89 L4 - 2.0L (CA20,CA20E) (Transverse)	3100074	3600004	30 MM	LF	7 o'clock	
1991-99 L4 - 2.0L (GA20DE) (Transverse)	3100007	3600005	30 MM THD	RR	N/A	
1980-85 L4 - 2.0L (Z20), 2.2L (Z22) (Conventional)	3100048	3600006	40 MM	LF	12 o'clock	
2007-2012 L4 - 2.0L (MR18DE)	See Dealer	N/A	N/A	N/A	N/A	
2002-2007 L4 - 2.5L (QR25DE) (Transverse)	3100007	3600005	30 MM THD	RF	N/A	
1989-2001 L4 - 2.4L (KA24E) (Transverse)	3100049	3600006	40 MM	LF	12 o'clock	
1989-98 L4 - 2.4L (KA24E, KA24DE) (Conventional)	3100049	3600006	40 MM	LR	12 o'clock	
6 Cylinder						
1974-80 L6 - 2.6L (L26)	3100016	3600006	35 MM	RF	12 o'clock	
1970-85 L6 - 2.4L, 2.8L(L24, L28 E, ET)	3100016	3600006	35 MM	3RD RS	12 o'clock	
1981-84 L6 - 2.8L(LD28) DIESEL	3100016	3600006	35 MM	LR	12 o'clock	
1986-93 V6 - 3.0L (VG30E, ET, DE) (Conventional)	3100009	3600004	30 MM	LR	6 o'clock	
1986-94 V6 - 3.0L (VG30E, DE) (Transverse)	3100009	3600004	30 MM	LF	6 o'clock	
1995-2001 V6 - 3.0L (VQ30DE) (Transverse)	3100007	3600005	30 MM THD	RF	N/A	
2002-2014 V6 - 3.5L (VQ35DE)(Transverse)	3100007	3600005	30 MM THD	RF	N/A	
2004-2009 V6 -3.5L (VQ35DE, VQ35HR) (Conventional)	3100007	3600005	30 MM THD	LR	N/A	16
2010-2014 V6 - 3.7L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	
2010-2014 V6 - 3.8L Turbo (VR38DETT)	See Dealer	N/A	N/A	N/A	N/A	
LIGHT & MEDIUM DUTY TRUCKS						
4 Cylinder						
1970-73 L4 - 1.6L OHC ENG	3100048	3600006	40 MM	LF or RR	12 o'clock	
1974-80 L4 - 1.8L (L18), 2.0L (L20)	3100048	3600006	40 MM	3RD RS	12 o'clock	
1981-89 L4 - 2.0L (Z20), 2.2L (Z22), 2.4L (Z24)	3100048	3600006	40 MM	LF	12 o'clock	
1990-98 L4 - 2.4L (KA24E)	3100049	3600006	40 MM	LR	12 o'clock	
1981-88 L4 - 2.2, 2.5L(SD25) DIESEL	3100016	3600006	35 MM	LF	6 o'clock	
2005-2007 L4 - 2.5L (QR25DE) (Conventional)	3100007	3600005	30 MM THD	LF	N/A	
6 Cylinder						
1984-95 V6 - 3.0L (VG30E, VG30i)	3100009	3600004	30 MM	LR	6 o'clock	
1993-98 V6 - 3.0L (VG30E) (Transverse) [Quest]	3100009	3600004	30 MM	LF	6 o'clock	
1999-00 V6 - 3.3L (VG33) (Transverse) [Quest]	3100009	3600004	30 MM	LF	6 o'clock	
1998-2004 V6 - 3.3L (VG33) (Conventional)	3100009	3600004	30 MM	LR	6 o'clock	
2001-2014 V6 - 3.5L (VQ35DE) (Conventional)	3100007	3600005	30MM THD	LF	N/A	
2005-2014 V6 - 4.0L (VQ40DE)(Conventional)	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
2004-2014 V8 - 5.6L (VK56DE)	3100007	3600005	30MM THD	RF	N/A	
OLDSMOBILE						
AUTOMOTIVE						
4 Cylinder						
1982-89 L4 - 1.8L, 2.0L OHC (Brazil engine)	3100015	3600006	34 MM	2ND LF	1 or 3 o'clock	
1982-84 L4 - 1.8L, 2.0L	3100014	3600006	34 MM	LF	12 o'clock	
1985-86 L4 - 2.0L	3100062	3600006	42 MM	LF	4 o'clock	
1987-92 L4 - 2.2L	3100081	3600006	42 MM	LF	9 o'clock	
1993-96 L4 - 2.0L, 2.2L (Transverse)	3100081	3600006	42 MM	LF	9 o'clock	
2002-2004 L4 2.2L (Ecotec) (Transverse)	3400019	3600100	CLAMP-ON	RR	N/A	
1987-93 L4 - 2.3L QUAD IV	3100093	3600023	3/4" NPT	N/A	N/A	3
1994-95 L4 - 2.3L QUAD IV GEN II	3100001	3600002	1/2" NPT	N/A	N/A	
1996-2001 L4 - 2.4L (Twin Cam)	3100001	3600002	3/4" NPT	N/A	N/A	

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
1980-92 L4 - 2.5L (Transverse)	3100076	3600006	1-5/8"	LF	12 o'clock	
1978-81 L4 - 2.5L (Conventional)	3100076	3600006	1-5/8"	LR	12 o'clock	
6 Cylinder						
1980-86 V6 - 2.8L (Transverse)	3100014	3600006	34 MM	RS	3 o'clock	7
1987-89 V6 - 2.8L (Transverse) (VIN W)	3100015	3600006	34 MM	CR	3 o'clock	2
1982-88 V6 - 3.0L (Transverse)	3100041	3600006	1-1/2"	LF	12 o'clock	
1989-99 V6 - 3.1L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2
1992-97 V6 - 3.4L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2,5
1999-2004 V6 - 3.4L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2, 5
1999-2002 V6 - 3.5L DOHC (Transverse)	See Dealer	N/A	CLAMP-ON	N/A	N/A	
1989-98 V6 - 3300, 3800 (Transverse)	3100041	3600006	1-1/2"	RF or LF	12 o'clock	
1975-88 V6 - 3.8L (231 cu. in.) (Conventional)	3100039	3600006	1-1/2"	RR	12 o'clock	1
1984-88 V6 - 3.8L (231 cu. in.) (Transverse)	3100041	3600006	1-1/2"	LF	3 o'clock	
1981-84 V6 - 4.1L (252 cu. in.) (Conventional)	3100039	3600006	1-1/2"	RR	12 o'clock	1
1983-85 V6 - 4.3L DIESEL (Transverse)	3100039	3600006	1-1/2"	RF or RR	12 o'clock	
1982-85 V6 - 4.3L DIESEL (Conventional)	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1991-96 V6 - 4.3L	3100057	3600006	1-5/8"	LR	6 o'clock	
1968-76 L6 - 250 cu. in.	3100054	3600006	1-5/8"	LF or LR	6 or 12 o'clock	
8 Cylinder						
1979-85 V8 - 260 cu. in. DIESEL	3100039	3600006	1-1/2"	LR	12 o'clock	
1975-82 V8 - 260 cu. in. GAS	3100039	3600006	1-1/2"	RF	6 o'clock	
1997-2003 V8 - 4.0L [Aurora]	See Dealer	N/A	CLAMP-ON	N/A	N/A	
1980-81 V8 - 4.3L (265 cu. in.)	3100070	3600006	1-15/16"	LC	11 o'clock	1
1981-82 V8 - 4.4L (267 cu. in.)	3100057	3600006	1-5/8"	LR	9 o'clock	
1980-90 V8 - 5.0L (307 cu. in.)	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1979 V8 - 301 cu. in.	3100070	3600006	1-15/16"	LC	6 or 12 o'clock	
1977-92 V8 - 305, 350 cu. in. (Chevrolet engine)	3100057	3600006	1-5/8"	LR	9 o'clock	
1964-67 V8 - 330 cu. in.	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
1968-81 V8 - 350, 455 [Except Delmont] (Olds eng)	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
ALL V8 - 350 [Delmont]	3100039	3600006	1-1/2"	RC	12 o'clock	
1967-76 V8 - 400 cu. in.	3100039	3600006	1-1/2"	LF or RC	12 o'clock	
1975 V8 - 400 cu. in. [Vista Cruiser]	3100070	3600006	1-15/16"	LF	6 o'clock	
1977-79 V8 - 403 cu. in.	3100039	3600006	1-1/2"	RF	12 o'clock	
1978-85 V8 - 350 cu. in. DIESEL	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
LIGHT & MEDIUM DUTY TRUCKS						
2004 L6 - 4.2L	3100005	3600100	28MM THD	LF	N/A	
1991-96 V6 - 4.3L [Bravada]	3100054	3600006	1-5/8"	LR	12 o'clock	
PONTIAC						
3 Cylinder						
1985-99 L3 - 1.0L	3400002	3600002	CLAMP-ON	N/A	N/A	
4 Cylinder						
1987-99 L4 - 1.3L (Suzuki engine)	3400004	3600020	CLAMP-ON	N/A	N/A	
1985-87 L4 - 1.5L (Transverse)	3100018	3600006	35 MM	CR	12 o'clock	
1981-88 L4 - 1.6L OHV (Conventional)	3100014	3600006	34 MM	RF	6 o'clock	
2004-2009 L4 - 1.6L [Wave]	3100008	3600003	36 MM	LF	N/A	
1988-98 L4 (Suzuki engine) [Sunrunner]	3400003	3600002	CLAMP-ON	N/A	N/A	
1988-93 L4 - 1.6L (Transverse) [Lemans]	3100015	3600006	34 MM	LF	3 o'clock	2
1982-84 L4 - 1.8L, 2.0L, OHV	3100014	3600006	34 MM	LF	12 o'clock	
1982-87 L4 - 1.8L DIESEL	3100018	3600006	35 MM	RR	12 o'clock	
1982-94 L4 - 1.8L, 2.0L OHC (Brazil engine)	3100015	3600006	34 MM	2ND LF	3 o'clock	2
2002-2009 L4 - 1.8L (1ZZFE) (Transverse)[Vibe]	3100129	3600083	Cartridge	LR	N/A	
2007-2009 L4 - 2.0L (Ecotec Turbo) (Conventional)	See Dealer	3600082	CLAMP-ON	N/A	N/A	
1995-2001 L4 - 2.2L	3100081	3600006	42 MM	LF	9 o'clock	
2002-2004 L4 - 2.2L (Ecotec) (Transverse)	3400019	3600100	CLAMP-ON	RR	N/A	
2005-2009 L4 - 2.2L (Ecotec) (Transverse)	3400020	3600082	CLAMP-ON	RR	N/A	15
1985-86 L4 - 2.0L	3100062	3600006	42 MM	LF	4 o'clock	
1987-93 L4 - 2.3L QUAD IV	3100093	3600003	3/4" NPT	N/A	N/A	3
1994-95 L4 - 2.3L QUAD IV GEN II	3100001	3600002	1/2" NPT		N/A	
2006-2009 L4 - 2.4L (Ecotec) (Transverse)	3400020	3600082	CLAMP-ON	RR	N/A	15
2006-2009 L4 - 2.4L (Ecotec) (Conventional)	3400020	3600082	CLAMP-ON	RF	N/A	15
1996-2001 L4 - 2.4L (Twin Cam)	3100001	3600002	1/2" NPT		N/A	
2009 L4 - 2.4L (Toyota Engine) [Vibe]	3100129	3600083	Cartridge	LR	N/A	
1977-87 L4 - 2.5L (Conventional)	3100076	3600006	1-5/8"	LR	6 or 12 o'clock	
1980-94 L4 - 2.5L (Transverse)	3100076	3600006	1-5/8"	LF	12 o'clock	

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
6 Cylinder						
1980-86 V6 - 2.8L (Transverse)	3100014	3600006	34 MM	RS	3 o'clock	7
1985-89 V6 - 2.8L (Transverse) (VIN W)	3100015	3600006	34 MM	CR	3 o'clock	2
1982-89 V6 - 2.8L (Conventional)	3100014	3600006	34 MM	RFF IN BLOCK	3 o'clock	
1985-88 V6 - 3.0L (Transverse)	3100041	3600006	1-1/2"	LF	12 o'clock	
1990-97 V6 - 3.1, 3.4L (Conventional)	3100015	3600006	34 MM	LC or RC	3 o'clock	2
1988-2002 V6 - 3.1L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2
1992-97 V6 - 3.4L (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2,5
1999-2004 V6 - 3.4 (Transverse)	3100015	3600006	34 MM	CR	3 o'clock	2, 5
2005-2009 V6 - 3.4 (Transverse) [Torrent]	3100109	3600082	28 MM THD	CR	N/A	15
2005-200 V6 - 3.5L (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
2007-2009 V6 - 3.6L (Transverse)	3100110	3600082	Cartridge	LR	N/A	15
2008-2009 V6 - 3.6L (Conventional)	3100110	3600082	Cartridge	LR	N/A	15
2005-2009 V6 - 3.9L (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
1988-2004 V6 - 3300, 3800 (Transverse)	3100041	3600006	1-1/2"	RF or LF	12 o'clock	
2005-2009 V6 - 3800 (Transverse)	3100109	3600082	28 MM THD	CR	N/A	15
1996-2002 V6 - 3.8L Firebird	3100041	3600006	1-1/2"	RF	12 o'clock	
1976-88 V6 - 3.8L (231 cu. in.) (Conventional)	3100039	3600006	1-1/2"	RR	12 o'clock	1
1987-89 V6 - 3.8L (231 cu. in.) (Transverse)	3100041	3600006	1-1/2"	LF	3 o'clock	
1980-81 V6 - 3.8L (229 cu. in.)	3100057	3600006	1-1/2"	LR	6 o'clock	
1982-83 V6 - 4.1L (252 cu. in.)	3100039	3600006	1-1/2"	RR	12 o'clock	1
1985-87 V6 - 4.3L	3100057	3600006	1-5/8"	LR	6 o'clock	
1982-85 V6 - 4.3L DIESEL	3100039	3600006	1-1/2"	LF or LR	12 o'clock	
1955-73 L6 - 194, 230, 250 cu. in.	3100054	3600006	1-5/8"	LF	12 o'clock	
1974-78 L6 - 250 cu. in.	3100054	3600006	1-5/8"	LR	12 o'clock	8
8 Cylinder						
1975-76 V8 - 260 cu. in.	3100039	3600006	1-1/2"	RF	6 o'clock	
1980-81 V8 - 4.3L (265 cu. in.)	3100070	3600006	1-15/16"	LC	11 o'clock	1
1978-82 V8 - 4.4L (267 cu. in.)	3100057	3600006	1-5/8"	LR	9 o'clock	
1977-81 V8 - 301 cu. in.	3100070	3600006	1-15/16"	LR	6 or 12 o'clock	
1958-94 V8 - 283,305,307,327,350,400 (Red) cu. in.	3100057	3600006	1-5/8"	LR	9 o'clock	
1973-79 V8 - 350, 400, 455 (Blue) cu. in.	3100070	3600006	1-15/16"	LC or LR	12 o'clock	
2005-2007 V8 - 5.3L (Transverse)	3100109	3600082	28 MM THD	RF	N/A	15
1998-2002 V8 - 5.7L Gen 3	3100005	3600100	28 MM THD	LR	N/A	
2004 V8 - 5.7L Gen 3	3100005	3600100	28 MM THD	LR	N/A	
1980-85 V8 - 5.7L (350 cu. in.) DIESEL	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
2005-2006 V8 - 6.0L LS2	3100109	3600082	28MM THD	LF	N/A	15
2008-2009 V8 - 6.0L	3100109	3600082	28MM THD	LF	N/A	15
2009 V8 - 6.2L	3100109	3600082	28MM THD	LF	N/A	15
1962-70 V8 - 396, 409, 427 cu. in.	3100065	3600006	1-3/4"	RC or LF	3 or 12 o'clock	
1977-89 V8 - 307,350, 403 cu. in. (Oldsmobile eng)	3100039	3600006	1-1/2"	RF	12 o'clock	
1970-77 V8 - 454 cu. in.	3100065	3600006	1-3/4"	RC	6 o'clock	
1971-81 V8 - 350 cu. in. (Buick engine)	3100039	3600006	1-1/2"	LF or RF	12 o'clock	
PORSCHE						
6 Cylinder						
1998-2011 H6 - 2.5L, 2.7L, 3.0L, 3.2L, 3.6L, 3.8L, 4.0L	See Dealer	N/A	N/A	N/A	N/A	
2012 V6 - 3.0L Hybrid	See Dealer	N/A	N/A	N/A	N/A	
2004-2007 V6 - 3.2L [Cayenne]	3100010	3600005	30 MM	CFF	10 o'clock	
2007-2010 V6 - 3.6L [Cayenne]	See Dealer	N/A	N/A	N/A	N/A	
2011-2014 V6 - 3.6L [Panamera,Cayenne}	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
2003-2006 V8 - 4.5L [Cayenne & Turbo]	See Dealer	N/A	N/A	RFF	N/A	
2007-2014 V8 - 4.8L [Cayenne & Panamera]	See Dealer	N/A	N/A	N/A	N/A	
LAND ROVER						
4 Cylinder						
1958-UP L4 - 120.8 cu. in. Gas/Diesel [Land Rover]	3100070		1-15/16"	LC	6 o'clock	
2012-2014 L4 2.0L TURBO	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
1958-UP L6 - 161, 182.7 cu. in.	3100003	3600001	1" NPT	N/A	N/A	
2002-2005 V6 - 2.5L	See Dealer	N/A	N/A	N/A	N/A	
2007-2012 L6 - 3.2L	See Dealer	N/A	N/A	N/A	N/A	
2004-2008 V6 - 4.0L	3100039	3600006	1-1/2"	RF	6 o'clock	
8 Cylinder						
1987-2004 V8 - 3.9, 4.0, 4.2, 4.6L	3100039	3600006	‘1-1/2"	LC	12 o'clock	

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED) HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
2003-2004 V8 - 4.4L (BMW Engine)	See Dealer	N/A	N/A	N/A	N/A	
2005-2009 V8 - 4.2L, 4.4L (Jaguar Engine)	See Dealer	N/A	30 MM THD	LR	N/A	
2010-2014 V8 - 5.0L	See Dealer	N/A	30 MM THD	LR	N/A	
SAAB						
4 Cylinder						
1975-84 L4 - 2.0, 2.1L	3100056	3600006	1-5/8"	RR	3 o'clock	
1985-93 L4 - 2.0, 2.1L	See Dealer	3600084	26 MM THD	N/A	N/A	
2003-2012 L4 2.0L Turbo	See Dealer	N/A	CLAMP-ON	N/A	N/A	
2004-2005 H4 2.0L Turbo (Subaru Engine)	3100008	3600003	36 MM THD	Left Front Bottom	N/A	
1990-2005 L4 - 2.3L (B234)	3100033	3600006	36 MM	LF	9 o'clock	
2004-2005 H4 2.5L (Subaru Engine)	3100008	3600003	36 MM THD	Left Front Bottom	N/A	
6 Cylinder						
1994-95 V6 - 2.5L	See Dealer	N/A	N/A	N/A	N/A	
2006-2012 V6 - 2.8L Turbo	See Dealer	N/A	N/A	N/A	N/A	
1999-2003 V6 - 3.0L	3100006	3600005	LF	N/A	N/A	
2005-2007 L6 - 4.2L (Conventional)	3100109	3600082	28 MM THD	LF	N/A	15
8 Cylinder						
2005-2007 V8 - 5.3L (Conventional)	3100109	3600082	28 MM THD	LR	N/A	15
SATURN						
4 Cylinder						
1991-2001 L4 - 1.9L	See Dealer	N/A	CLAMP-ON	N/A	N/A	
2004 L4 - 2.0L (Ecotec) (Transverse)	3400019	3600100	CLAMP-ON	RR	N/A	
2005-2006 L4 - 2.0L (Ecotec) (Transverse)	3400020	3600082	CLAMP_ON	RR	N/A	15
2007-2009 L4 - 2.0L (Ecotec Turbo) (Conventional)	See Dealer	3600082	CLAMP-ON	N/A	N/A	
2000-2004 L4 - 2.2L (Ecotec) (Transverse)	3400019	3600100	CLAMP-ON	RR	N/A	
2005-2006 L4 - 2.2L (Ecotec) (Transverse)	3400020	3600082	CLAMP_ON	RR	N/A	15
2006-2009 L4 - 2.4L (Ecotec) (Transverse)	3400020	3600082	CLAMP_ON	RR	N/A	15
2006-2009 L4 - 2.4L (Ecotec) (Conventional)	3400020	3600082	CLAMP_ON	RF	N/A	15
6 Cylinder						
2000-2004 V6 - 3.0L	3100006	3600005	28MM THD	LF	N/A	
2005-2006 V6 - 3.0L	See Dealer	N/A	N/A	N/A	N/A	
2007-2009 V6 - 3.5L (Transverse)	3100109	3600082	28 MM THD	LR	N/A	15
2007-2009 V6 - 3.6L (Transverse)	3100110	3600082	Cartridge	LR	N/A	15
LIGHT & MEDIUM DUTY TRUCKS & VANS						
4 Cylinder						
2002-2004 L4 - 2.2L	3400019	3600100	CLAMP-ON	RR	N/A	
2005-2007 L4 - 2.2L	3400020	3600082	CLAMP_ON	RR	N/A	15
6 Cylinder						
2002-2004 V6 - 3.0L	3100006	3600005	28MM THD	LF	N/A	
2005-2007 V6 - 3.0L	See Dealer	N/A	N/A	N/A	N/A	
2004-2007 V6 - 3.5L [Honda Engine]	3100006	3600005	28MM THD	LF	N/A	
2005-2009 V6 - 3.5L	3100109	3600082	28 MM THD	LR	N/A	15
2007-2009 V6 - 3.6L (Transverse)	3100110	3600082	Cartridge	LR	N/A	15
SCION						
4 Cylinder						
2004-2009 L4 - 1.5L (1NZ-FE)	3100129	3600083	Cartridge	LR	N/A	
2012-2014 H4 - 2.0L	See Dealer	N/A	36MM THD	Left Front Bottom	N/A	
2004-2014 L4 2.4L	3100129	3600083	Cartridge	LR	N/A	
2011-2014 L4 - 2.5L (2AR-FE)	See Dealer	N/A	N/A	N/A	N/A	
SMART						
3 Cylinder						
2005-2007 L3 DIESEL [ForTwo]	See Dealer	N/A	N/A	N/A	N/A	
2008-2014 L3 GASOLINE [ForTwo]	See Dealer	N/A	N/A	N/A	N/A	
SUBARU						
ALL H4 & H6 - 1980-2012	3100008	3600003	36 MM THD	Left Front Bottom	N/A	
2012-2014 H4 - 2.0L	See Dealer	N/A	36 MM THD	Left Front Bottom	N/A	
2008-2014 H6 - 3.6L	See Dealer	N/A	36 MM THD	N/A	N/A	
SUZUKI						
3 Cylinder						
1985-00 L3 - 1.0L	3400002	3600002	CLAMP-ON	N/A	N/A	
4 Cylinder						
1985-99 L4 - 1.3L	3400004	3600020	CLAMP-ON	N/A	N/A	

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

ZEROSTART

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
1989-2001 L4 - 1.6L	3400003	3600002	CLAMP-ON	N/A	N/A	
2005-2006 L4 - 1.6L [Swift]	See Dealer	N/A	N/A	N/A	N/A	
2011-2012 L4 1.6L [Swift]	See Dealer	N/A	N/A	N/A	N/A	
1998-2003 L4 - 1.8L	See Dealer	N/A	30 MM	LR	N/A	
1999-2003 L4 - 2.0L	See Dealer	N/A	30 MM	LR	N/A	
2003-2004 L4 - 2.0L [Aerio]	See Dealer	N/A	N/A	N/A	N/A	
2004-2005 L4 - 2.0L [Reno]	See Dealer	N/A	N/A	N/A	N/A	
2007-2012 L4 - 2.0L [SX4]	See Dealer	N/A	N/A	N/A	N/A	
2005-2007 L4 - 2.3L [Aerio]	See Dealer	N/A	N/A	N/A	N/A	
2009-2012 L4 - 2.4L (J24B) [Vitara, Kizashi]	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
2004-2006 L6 - 2.5L	See Dealer	N/A	N/A	N/A	N/A	
1999-2003 V6 - 2.5L	See Dealer	N/A	CLAMP-ON	LF	N/A	
2004 L6 - 2.5L	See Dealer	N/A	CLAMP-ON			
2001-2007 V6 - 2.7L	See Dealer	N/A	CLAMP-ON	LF	N/A	
2008-2009 V6 - 3.2L	3100110	3600082	Cartridge	LR	N/A	15
2007-2010 V6 - 3.6L [XL7]	3100110	3600082	Cartridge	LR	N/A	15
2011-2012 V6 - 4.0L [Equator]	See Dealer	N/A	N/A	N/A	N/A	
TOYOTA						
AUTOMOTIVE						
4 Cylinder						
1967-80 L4 - 1.1L (K), 1.2L (3K, 3KC)	3100016	3600006	35 MM	LF	6 o'clock	
1981-85 L4 - 1.3L (4KC, 4KE)	3100021	3600006	35 MM	LF	6 o'clock	
1980-87 L4 - 1.5L (3A, 1AC, 3AC)	3100049	3600006	40 MM	LC	12 o'clock	
1988-90 L4 - 1.5L (3E)	3100021	3600006	35 MM	LF	10-12 o'clock	
1990-94 L4 - 1.5L (3EE)	3100019	3600006	35 MM	LF	12 o'clock	
1992-99 L4 - 1.5L (5EFE)	3100011	3600004	30 MM	2ND RF	3 o'clock	
2000-2014 L4 - 1.5L (1NZ-FE)	3100129	3600083	Cartridge	LR	N/A	
2004-2009 L4 - 1.5L (1NZ-FXE) [Prius]	See Dealer	N/A	Cartridge	LR	N/A	
1983-86 L4 - 1.6L (4AC) (Conventional)	3100049	3600006	40 MM	2ND LF	12 o'clock	
1985-97 L4 - 1.6L (4AF, 4AFE) (Transverse)	3100049	3600006	40 MM	CF	12 o'clock	
1984-87 L4 - 1.6L (4AC) (Transverse)	3100049	3600006	40 MM	2ND LF	12 o'clock	
1985-88 L4 - 1.6L (4AGE) (Conventional)	3100021	3600006	35 MM	RC	9 or 12 o'clock	
1985-89 L4 - 1.6L (4AGE) (Mid engine)	3100021	3600006	35 MM	RF	12 o'clock	
1988-91 L4 - 1.6L (4AGE) (Transverse)	3100021	3600006	35 MM	LR	9 or 12 o'clock	
1971-82 L4 - 1.6L (2TC), 1.8L (3TC)	3100075	3600004	35 MM	LF	9 o'clock	
1970-78 L4 - 1.8L (8R, 8RC)	3100048	3600006	40 MM	LC	12 o'clock	
1966-80 L4 - 1.8L (3R, 3RB, 3RC)	3100071	3600006	50 MM	LF	12 o'clock	
1993-97 L4 - 1.8L (7AFE) (Transverse)	3100049	3600006	40 MM	CF	12 o'clock	
1998-2014 L4 - 1.8L (1ZZFE) (Transverse)	3100129	3600083	Cartridge	LR	N/A	
2010-2014 L4 - 1.8L (2ZR-FXE) [Prius]	See Dealer	N/A	Cartridge	LR	N/A	
94-2002 V8 - 7.3L (T444E)	3100129	3600083	Cartridge	LR	N/A	
1972-74 L4 - 2.0L (18RC)	3100049	3600006	40 MM	RR	12 o'clock	
1987-91 L4 - 2.0L (3SFE)	3100098	3600006	35 MM	2ND RR	9 o'clock	
1986-89 L4 - 2.0L (3SGE)	3100019	3600006	35 MM	2ND RR	9 or 12 o'clock	
1983-86 L4 - 2.0L (2SE,2SGE)	3100049	3600006	40 MM	2ND LF	12 o'clock	
1975-80 L4 - 2.2L (20R)	3100049	3600006	40 MM	RF	6 o'clock	
1991-93 L4 - 2.2L (5SFE) MR2	3100021	3600006	35 MM	2ND LR	9 o'clock	
1990-95 L4 - 2.2L (5SFE) [Celica]	3100049	3600006	40 MM	2ND LF	12 o'clock	
1990-2001 L4 - 2.2L (5SFE) (Transverse)	3100049	3600006	40 MM	2ND LF	12 o'clock	
1990-93 L4 - 2.2L (5SFE) (Mid engine)	3100049	3600006	40 MM	2ND LR	12 o'clock	
1981-85 L4 - 2.4L (22R, 22RE)	3100049	3600006	40 MM	RF	10 o'clock	
2002-2008 L4 - 2.4L (2AZ-FE)	3100129	3600083	Cartridge	LR	N/A	
2009-2014 L4 - 2.5L (2AR-FE)	See Dealer	N/A	Cartridge	LR	N/A	
6 Cylinder						
1989-91 V6 - 2.5L (2VZFE)	3100019	3600006	35 MM	CF	6 o'clock	
1992-96 V6 - 3.0L (3VZFE)	3100021	3600006	35 MM	LF	3 o'clock	
1994-2006 V6 - 3.0L (1MZ-FE)	3100029	3600006	35 MM	RF	3 o'clock	
1966-71 L6 - 2.2L (2M)	3100048	3600006	40 MM	LF	12 o'clock	
1971-79 L6 - 2.6L (4M)	3100049	3600006	40 MM	RR	5 o'clock	
1979-88 L6 - 2.6L (4ME), 2.8L (5ME, 5MGE)	3100049	3600006	40 MM	RF	10 o'clock	
1986-95 L6 - 2.8L (5MGE)	3100049	3600006	40 MM	LF	10-12 o'clock	
1986-95 L6 - 3.0L (7MGE)	3100049	3600006	40 MM	LF	10-12 o'clock	
2004-2006 V6 - 3.3L	3100029	3600006	35 MM	RF	3 o'clock	
2005-2014 V6 - 3.5L (2GR-FE)	See Dealer	N/A	Cartridge	LF	N/A	

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*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
LIGHT & MEDIUM DUTY TRUCKS & VANS						
4 Cylinder						
1981-87 L4 - 1.8L (L), 2.2L (2L,2LT) DIESEL	3100024	3600006	35 MM	LR	12 o'clock	1
1996-00 L4 - 2.0L (3SFE) [RAV4]	3100098	3600006	35 MM	2ND RR	9 o'clock	
2001-2005 L4 - 2.0L [RAV4]	3100129	3600083	Cartridge	LR	N/A	
1984-89 L4 - 2.0L (3YE), 2.2L (4YE)	3100019	3600006	35 MM	LR	9-12 o'clock	
1972-74 L4 - 2.0L (18RC)	3100049	3600006	40 MM	RR	12 o'clock	
1975-80 L4 - 2.2L (20R)	3100049	3600006	40 MM	RF	6 o'clock	
1981-98 L4 - 2.4L (22R, 22RE, 22RTE)	3100049	3600006	40 MM	RF	10 o'clock	
1991-97 L4 - 2.4L (2TZ-FE) [Previa]	3100022	3600006	35 MM	BOTTOM RF	9 o'clock	
2001-2013 L4 - 2.4L	3100129	3600083	Cartridge	LR	N/A	
1994-2014 L4 - 2.7L	See Dealer	N/A	N/A	N/A	N/A	
2009-2014 L4 - 2.7L (1AR-FE) (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1981-87 L4 - 3.4L (3B) DIESEL	3100021	3600006	35 MM	LR	11-12 o'clock	
6 Cylinder						
1988-98 V6 - 3.0L (3VZE)	3100098	3600006	35 MM	LF or 2ND LF	3 o'clock	
1998-2003 V6 - 3.0L (1MZ-FE)	3100029	3600006	35 MM	RF	3 o'clock	
2004-2006 V6 - 3.3L (2MZFE)	3100029	3600006	35 MM	RF	3 o'clock	
1997-2003 V6 - 3.4L (5VZ-FE)	See Dealer	N/A	N/A	N/A	N/A	
2003-2014 V6 - 4.0L (1GR-FE)	3100129	3600083	Cartridge	LR	N/A	
1985-87 L6 - 3.9L (2H) DIESEL	3100021	3600006	35 MM	RR	3 or 5 o'clock	
8 Cylinder						
2010-2013 V8 - 4.6L	See Dealer	N/A	N/A	N/A	N/A	
1998-2009 V8 - 4.7L (2UZ-FE)	See Dealer	N/A	35 MM	2ND RF	N/A	
2007-2013 V8 - 5.7L (3UR-FE)	3100129	3600083	Cartridge	LR	N/A	
VOLKSWAGEN						
4 Cylinder						
1962-76 L4 - ALL Air Cooled, except 411, 412	See Dealer	N/A	N/A	N/A	N/A	
1971-76 L4 - 411, 412	See Dealer	N/A	N/A	N/A	N/A	
1974-94 L4 - 1.5L, 1.6L &, 1.7L Gas/Diesel (Conv)	3100034	3600016	36.5 MM	2ND RF	6 o'clock	2
1974-94 L4 - 1.5L, 1.6L, & 1.7L Gas/Diesel (Trans)	3100034	3600016	36.5 MM	CR or RR	6 o'clock	2
1987-95 L4 - 1.8L (Conventional)	3100034	3600016	36.5 MM	RF	12 o'clock	2
1983-97 L4 - 1.8L (Transverse)	3100034	3600016	36.5 MM	CR or RR	12 o'clock	2
1998-2005 L4 - 1.8L (TURBO)	See Dealer	N/A	N/A	N/A	N/A	
1993-97 L4 - 1.9L TURBO DIESEL	3100034	3600016	36.5 MM	LR or CR	6 o'clock	2
1998-99 L4 - 1.9L TURBO DIESEL (Direct Injection)	3100034	3600016	36.5 MM	LR	N/A	2
2000-2005 L4 - 1.9L TURBO DIESEL (Direct Injection)	See Dealer	N/A	N/A	N/A	N/A	
1991-99 L4 - 2.0L (Transverse)	3100034	3600016	36.5 MM	CR or RR	6 o'clock	2
1998-2005 L4 - 2.0L [Beetle]	See Dealer	N/A	N/A	N/A	N/A	
2000-2014 L4 - 2.0L	See Dealer	N/A	N/A	N/A	N/A	
2004-2006 L4 - 2.0L DIESEL (Direct Injection)	See Dealer	N/A	N/A	N/A	N/A	
2009-2014 L4 - 2.0L DIESEL	See Dealer	N/A	N/A	N/A	N/A	
2006-2014 L4 - 2.0L TURBO FSI & TSI	See Dealer	N/A	N/A	N/A	N/A	
5 Cylinder						
1987-95 L5 - 2.2L, 2.3L	3100035	3600016	36.5 MM	RF or 2ND RF	3 o'clock	
2005-2014 L5 - 2.5L	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
1993-2002 VR6 - 2.8L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2003-2004 VR6 24V - 2.8L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2004 VR6 24V - 3.2L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2008 VR6 24V - 3.2L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1998-2004 V6 - 2.8L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	
2006-2014 VR6 - 3.6L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
2003-2004 W8 - 4.0L	See Dealer	N/A	N/A	N/A	N/A	
2004-2006 V8 - 4.2L	See Dealer	N/A	N/A	N/A	N/A	
12 Cylinder						
2004-2006 W12 - 6.0L	See Dealer	N/A	N/A	N/A	N/A	
LIGHT & MEDIUM DUTY TRUCKS & VANS						
4 Cylinder						
2009-2014 L4 - 2.0L TURBO TSI	See Dealer	N/A	N/A	N/A	N/A	
5 Cylinder						
1992-95 L5 - 2.5L	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
2002-2003 VR6 24V - 2.8L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	

† Please confirm element orientation - improper position may result in heater or engine damage.

*** Description of footnotes - see page 27. Circulation Heaters - see page 74-77. Lower Radiator Hose Heaters - see page 77.**

MAKE, MODEL, YEAR & ENGINE	FREEZE PLUG HEATER (UNLESS OTHERWISE NOTED)					
	HEATER PART No.	REPL. CORD PART No.	BORE DIAMETER	INSTALLATION LOCATION	POINT ELEMENT†	NOTES*
2010-2014 V6 - 3.0L DIESEL	See Dealer	N/A	N/A	N/A	N/A	
2003-2007 VR6 - 3.2L (Conventional)	3100010		30 MM	CFF	10 o'clock	
2007-2014 VR6 - 3.6L (Conventional)	See Dealer	N/A	N/A	N/A	N/A	
2009 V6 - 3.8L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2009 V6 - 4.0L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
2003-2010 V8 - 4.2L	See Dealer	N/A	N/A	N/A	N/A	
10 Cylinder						
2004-2008 V10 - 5.0L DIESEL	See Dealer	N/A	N/A	N/A	N/A	
VOLVO						
4 Cylinder						
2000-2003 L4 - 1.9L	See Dealer	N/A	N/A	N/A	N/A	
1985-91 L4 - 2.3L (B230)*	3100047	3600006	40 MM	RF	9 o'clock	14
1991-96 L4 - 2.3L (B230)	3100052	3600006	40 MM	RF	9 o'clock	14
1989-90 L4 - 2.3L (B234)	3100052	3600006	40 MM	RF	9 o'clock	
1962-79 L4 - 1.8L, 2.0L	3100064	3600006	1-3/4"	RR	3 o'clock	
1976-84 L4 - 2.1L, 2.3L (B21,B23)	3100064	3600006	1-3/4"	RR	9 o'clock	
5 Cylinder						
1993-2006 L5 - 2.3L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
1993-2011 L5 - 2.4L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2003-2014 L5 - 2.5L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2006-2014 L5 - 2.5L TURBO (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
6 Cylinder						
1976-90 V6 - 2.7L, 2.8L	3100031	3600006	36 MM	RRF IN HEAD	9 o'clock	
1980-86 L6 - 2.4L DIESEL	3100034	3600016	36.5 MM	RC	6 o'clock	
1969-79 L6 - 3.0L	3100064	3600006	1-3/4"	RR	9 o'clock	
1992-98 L6 - 3.0L	See Dealer	N/A	N/A	N/A	N/A	
1999-2006 L6 - 2.9L (Transverse, inc Turbo))	See Dealer	N/A	N/A	N/A	N/A	
2008-2014 L6 - 3.0L Turbo (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
2007-2014 L6 - 3.2L (Transverse)	See Dealer	N/A	N/A	N/A	N/A	
8 Cylinder						
2006-2011 V8 - 4.4L (Transverse)	3100002	3600001	3/4" NPT	LR	N/A	

Automotive Footnotes

† Please confirm element orientation. Improper position may result in heater or engine damage.

1) Remove and replace starter.
2) Pull or pry out core plug.
3) Replacement heater only. May require lower coolant return line (steel tube) - purchase from GM.
4) Remove and replace alternator.
5) Installation by certified mechanic recommended.
6) On some models, the air pump has to be loosened.
7) Remove right front wheel and splash guard.
8) Lower radiator hose heater: 1-3/4" dia. prior to 1970, 1-1/2" dia. later.
9) Lower radiator hose heater: 1970 & earlier—use 1-3/4" model; 1971-93—use 1-1/2" model.
10) Install in hose rise closest to water pump.
11) Lower radiator hose heater: 1977-82—use 1-1/4" model; 1983-85—use 1-1/2" model.
12) Lower radiator hose heater to 1993 only.
13) If LR is a 40mm core hole, install heater in 2nd LR.
14) Confirm with dealer on core hole type. Stepped core hole (1985-91). Normal style core hole (1991-96).
15) Kit contains a thermostatically controlled cord required for compatibility with the OBD 11 system in these vehicles.
16) May require mounting Elbow P/N 14075-AM700, Gasket P/N 11065-AM700 and Bolts P/N A1005H8, available from Nissan Infinity.

All Agricultural, Heavy Duty & Industrial Applications are CSA Approved (except where noted).

Agricultural, Heavy Duty, and Industrial listings appear as follows:

Manufacturer

MACK

E6 (672 CID 6 cyl.)



(Engines with smooth bore freeze plug. Example: EM6300, E6350, EM6237)

Part No.	Watt	Volt	Diameter	Type
8608748	1500	120	1-3/4"	Freeze Plug
8609772	150	**240**	1-3/4"	Freeze Plug

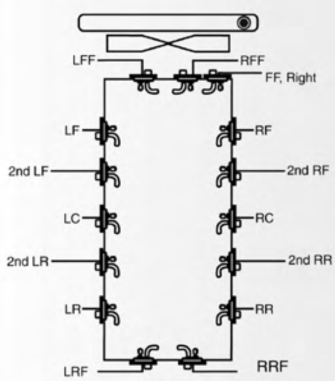
Engine diagram (if available)

Installation Information:

Replaces 1-3/4" freeze plug on side of engine.
Available Service Parts: O-ring and clamping device kit (3500003)

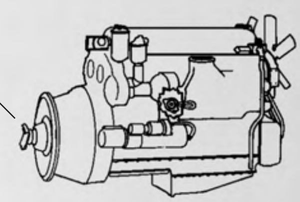
Product photo (if applicable)

- Installation Information. See chart below for mounting location information.
- Part Number, Heater Wattage, Heater Voltage, Bore Diameter (if applicable), Heater Type. "Plate" indicates mounting plate installation.
- Additional engine information, selection criteria
- Engine Model and/or size, plus any descriptions



Heater installation locations are as viewed from flywheel end of engine.

Flywheel



Typical applications for engine:

Agricultural Use



Industrial Use



Heavy Duty Truck Use



CF ....Center Front
CR ....Center Rear
F ....Front
FF ....Front face of block
LC...Left Center
LF ....Left Front
2nd LF................................2nd from left, front
LFF ....Front face, left cylinder
LLC ....Left side, lower center
LR ....Left Rear
2nd LR ....2nd from left, Rear
LS...Left side
R ....Rear
RC...Right center
Rear ....Rear face or side
RF ....Right front
2nd RF ....2nd from right front
RFF ....Front face, right cylinder head
RR ....Right Rear
RS ....Right side
2nd RR..........2nd Core plug from the right rear

Note: Heaters in this section ship with the appropriate standard 6 ft. cord.

Utilisation agricole, poids lourd & industriel

Toutes les utilisations agricoles, poids lourds & industriels sont approuvé CSA (sauf où il y a une note).

Les fiches descriptives pour utilisation agricole, poids lourd & industriel apparaissent comme suit :

Manufacturier

MACK

E6 (672 CID 6 cyl.)



(Moteurs avec bouchon expansible à alésage lisse. Exemple: EM6300, E6350, EM6237)

Part No.	Watt	Volt	Diameter	Type
8608748	1500	120	1-3/4"	Bouchon expansible
8609772	150	**240**	1-3/4"	Bouchon expansible

Diagramme du moteur (si disponible)

Consignes d'installation:

Remplace le bouchon expansible 1-3/4" sur le côté du moteur.
Pièces disponibles : ensemble de joints toriques et dispositif de serrage (3500003)

Photo du produit (si applicable)

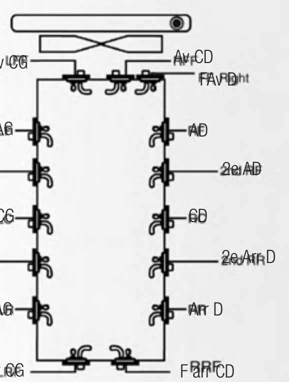
Consignes d'installation : voir le schéma ci-dessous pour information sur l'emplacement du montage.

No Pièce: puissance et tension du chauffe-moteur, diamètre de l'alésage (si applicable), type de chauffe-moteur, ''Plaque" indique installation avec plaque de montage.

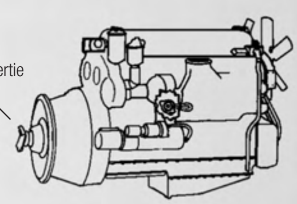
Critères de sélection additionnels en fonction du moteur.

Modèle et /ou grandeur du moteur, plus toutes autres descriptions.

Agricultural, HD, Off Road & Industrial



Emplacements d'installation du chauffe-moteur sont montrés à partir de l'extrémité du volant d'inertie et du moteur



Application d'usage pour un moteur

Usage agricole 

Usage industriel 

Usage pour camions lourd 

CA ....Centre avant
CArr ....Centre arrière
A...Avant
AB ....Face avant du bloc moteur
CG ....Centre gauche
AG...Avant gauche
2e AG ....2e avant gauche
A CG ....Face avant, gauche du cylindre
G BC ....Face gauche, bas du centre
Arr G......................................Arrière gauche

2e Arr G ....2e Arrière gauche
G ....Côté gauche
Arr ....Arrière
CD ....Centre droit
Arrière ....Face arrière ou côté
AD ....Avant droit
2e AD ....2e de l'avant droit
A, CCD ....Face avant, culasse de cylindre droit
Arr D ....Arrière droite
D..Côté droit
2e Arr D .....2e bouchon expansible à partir de l'arrière droite

Remarque: Les chauffes-moteurs dans cette section sont expédiés avec le cordon standard de 6 pi. approprié.

ALLIS CHALMERS

170 Diesel



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information:

Install in Left, 2nd from Rear. Point element UP/DOWN.

180, 185, 200, 7000, 7010, 7020
(649, 649T, 2800, 2900 engines)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500014	1000	120	Plate	Immersion	3600024

Installation Information:

Install in Right Rear (RR). Point element forward.

7030, 7040, 7045, 7050, 7060, 7080, 7580
(D21, 210, 220, 3500 & 3700, 670T & 670I engines)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008

Installation Information:

Install in Right Rear (RR).

W, WC, WD, WF, WR, WD-45



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200003	600	120	1-1/2"	LRHH	3600047

Installation Information:

Lower Radiator Hose Heater (see page 84). Circulation heater is acceptable alternative.

XP-170, XP190



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047

Installation Information:

Lower Radiator Hose Heater. Circulation heater is acceptable alternative.

XP180, XP210, XP220



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200005	600	120	2"	LRHH	3600047

Installation Information:

Lower Radiator Hose Heater. Circulation heater is acceptable alternative.

BELARUS

500, 800, 900 Series



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information:

Install in Right Front (RF). Use 1" x 3/4" bushing.

BOLENS

TS1910, TS3420 (2 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006

Installation Information:

Install in Left Side (LS). Point element DOWN.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

BOLENS - Continued

G2102, 2104, 2702, 2704



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Left Center (LC). Point element UP.

TX1502, TX1504, TX1704



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Right Side (RS). Point element UP.

5117H (Mitsubishi L3A)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 9 o'clock.

DAVID BROWN

All 900, 995, 1200, 1212



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100066	400	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Left Center (LC). Point element 12 o'clock.

CASE IH / JI CASE / CASE NEW HOLLAND

4 & 6 cyl: 336, 401, 451, 504 CID, 1470TK, W2A (504 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500024	1000	120	2"	Freeze Plug	3600008

Installation Information: Install in Right Rear (RR). Point element DOWN.

390 (4 cyl. 3.9L), **590** (6 cyl. 5.9L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500030	750	120	58mm	Freeze Plug	3600008
8601666	750	**240**	58mm	Freeze Plug	8608377

Installation Information: Installs in Right Side (RS). Point element DOWN. Circulation heater is acceptable alternative.

All 430, 730, 830 (188D, 251G, 267D, 284D, 310D)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500026	400	120	3/8" NPT	Immersion	N/A

Installation Information: Install in Left Side (LS). Circulation Heater or #3200005 Lower Radiator Hose Heater are acceptable alternatives.

6 cyl: 675 (675TWV, TV140)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100112	750	120	1-1/2”	Freeze Plug	3600023

Installation Information: 2nd core hole from rear right side.

830 (6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601860	1000	120	58mm	Freeze Plug	3600008
8601852	1000	**240**	58mm	Freeze Plug	8608377

Installation Information: Install in Right Rear (RR). Point element 4 o'clock. Circulation heater is acceptable alternative.

930 (6 cyl. 377G, 401D)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500026	400	120	3/8" NPT	Immersion	N/A

Installation Information: Install in Left Side (LS). Two heaters are required. Circulation heater is acceptable alternative.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CASE IH / JI CASE / CASE NEW HOLLAND - Continued

B10



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500149	1000	120	42mm THD	Immersion	3600008

Installation Information: Replace 42mm pipe plug. Service Parts: Hex Nut (8602999), Element Gasket (8603650)

Cursor Engine



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500150	1000	120	42MM THD	Immersion	3600008

Installation Information: Replace 42mm pipe plug. Service Parts: Hex Nut (8602999), Element Gasket (8603650)

Case Maxxum 4 & 6 Cylinder/ New Holland T6000 Series

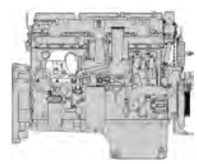


Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500154	750	120	58MM 2 Bolt Flange	Immersion	3600008

Installation Information: Install Right side of engine.

CATERPILLAR

C10, C12





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008
3500031	1500	**240**	1" NPT	Immersion	8608377

Installation Information:

Replaces 1" NPT plug in rear of oil cooler. Engine may also accept the following oil pan heaters: 8609683, 8609659, 8609713 (requires 1" x 1/2" bushing to reduce port size. See threaded immersion heater page for specifications.

C3.3B, C3.8



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500120	400	120	1" NPT	Immersion	3600110

Installation Information: C3.3B - Left Front (LF), C3.8 - Right Rear (RR).

C3.4, C3.4B



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100117	600	120	40mm	Freeze Plug	3600006

Installation Information: Right Front (RF).

C4.4



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500084	750	120	1-1/4	Freeze Plug	3600008

Installation Information: Only use 3500084 when replacing existing freeze plug. 3500145 is recommended for all new installations. Install 3500145 Left Center (LC). Install 3500084 Right Rear (RR) or Right Front (RF) with element at 3 o'clock.

C4.4 ACERT Tier 4



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500145	600	120	3/4" NPT	Immersion	3600100
3500148	600	**240**	3/4" NPT	Immersion	8608377

Installation Information: Left Center (LC).

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CATERPILLAR - Continued

C9.3, C15



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500117	1500	120	1-5/16" – 12	Immersion	3600008
3500128	1500	**240**	1-5/16" – 12	Immersion	8608377

Installation Information: Right Rear (RR).

C18 ACERT



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500077	1500	120	1-3/16" – 12	Immersion	3600008
3500132	1500	**240**	1-3/16" – 12	Immersion	8608377

Installation Information: Right Rear (RR).

2004-2006 C11 ACERT, C13 ACERT, 2004-2006 C11, C13



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500075	1500	120	1-5/16" – 12	Immersion	3600008
3500074	1500	**240**	1-5/16" – 12	Immersion	8608377

Installation Information: Replaces 1-5/16" threaded plug in rear of oil cooler. Engine may also accept the following oil pan heaters: 3500079, 3500078 (replaces 1-5/16" threaded plug).

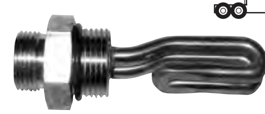
2004-2006 C9 ACERT, C15 ACERT, C16 ACERT



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500073	1500	120	1-1/16" – 12	Immersion	3600008
3500077	1500	120	1-3/16" – 12	Immersion	3600008
3500076	1500	**240**	1-3/16" – 12	Immersion	8608377

Installation Information: Replaces 1-3/16" threaded plug in rear of oil cooler bonnet. Engine may also accept the following oil pan heaters: 3500079, 3500078 (replaces 1-5/16" threaded plug).

2007 & NEWER CAT C13 ACERT & C15 ACERT



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500111	1500	120	1-3/16" – 12	Immersion	3600008

Installation Information: Replaces 1-3/16" plug located in the rear of the oil cooler, on right hand side of engine.

C9, C15, C16



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	**240**	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	**240**	1" NPT	Immersion	8608377

Installation Information: Install in oil cooler rear bonnet.

1100 Series, 3100 Series



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601518	1000	120	1-3/4"	Freeze Plug	3600008
8601577	1500	120	1-3/4"	Freeze Plug	3600008

Installation Information: Replaces freeze plug. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650).

1404 (163 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100088	400	120	2.125"	Freeze Plug	3600006

Installation Information: Install in Left Center (LC) or Left Rear (LR). Point element 12 o'clock.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CATERPILLAR - Continued

1670 (350 CID), **G/D 333** (525/638 CID), **1693, 1674** (638 CID)

Use Circulation Heater.

1693 & D343 (893 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601909	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650).

1693T & 1693TA (893 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601976	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650).

3003 (3 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 6 o'clock.

3013 (3 cyl.), **3024, 3014** (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information Install in Left Front (LF). Point element 6 o'clock.

3034 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100101	400	120	50mm	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 4 o'clock.

3046 (5 Litre)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100078	400	120	35mm	Freeze Plug	3600006

Installation Information: Install 2nd Left Rear (LR). Point element 6 o'clock.

2004-2006 3054C, 3054E, C4.4



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500084	750	120	1-1/4”	Freeze Plug	3600008

Installation Information: Install Right Rear, Point element 3 o’clock.

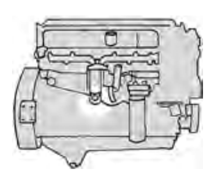
3054, 3056



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007

Installation Information: Install in 1-1/2" core hole on Right Side of engine, between #1 and #2 cylinders, behind exhaust manifold.

3114 (4.4L), **3116** (6.6L), **3126** (7.2L), **3126B** (7.2L), **C7** (7.2L, all years prior to 2004), **C7 ACERT** (2004-2007), **CFE** (Caterpillar/Freightliner Engine)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500015	1000	120	44mm	Freeze Plug	3600048
3500016	1000	**240**	44mm	Freeze Plug	N/A
3500081	1500	120	44mm	Freeze Plug	3600048

Installation Information: Replaces core plug on center of Right Side. Heater kit includes special high temperature cordset. Engine may also accept oil pan heater 3500006 (3116 only). See threaded immersion heater page for specifications.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CATERPILLAR - Continued

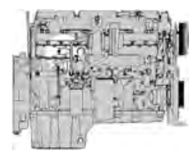
3150, 3160 (636 C.I.D.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602816	600	120	44mm	Freeze Plug	3600008

Installation Information: **3150:** Replaces rear freeze plug on right side of engine (requires one heater) **3160:** Replaces center freeze plug on side of engine (requires two heaters) Available Service Parts: Hex nut (8602999), Element gasket (8603650)

3176 (10.2L)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601267	1500	120	3/4" NPT	Immersion	3600008

Installation Instructions: Replaces 3/4" pipe plug on Right Rear Side of engine. Special high temperature cordset included in kit. Engine may also accept Oil Pan Heaters 8609683, 8609659, or 8609713 (requires 1" x 1/2" bushing to reduce port size). See threaded immersion heater page for specifications.

3196



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008
3500031	1500	**240**	1" NPT	Immersion	8608377

Installation Information: Replaces 1" NPT plug in rear of oil cooler. Engine may also accept the following oil panheaters: 8609683, 8609659, 8609713 (requires 1" x 1/2" bushing to reduce port size. See page 64 for oil pan heater specifications).

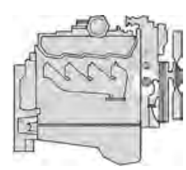
3204, 3208 (636 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602816	600	120	44mm	Freeze Plug	3600008

Installation Information: **3204**: Replaces Rear freeze plug on Right Side of engine (requires one heater).
3208: Replaces center freeze plug on side of engine (requires two heaters). Available Service Parts: Hex Nut (8602999), Element Gasket (8603650).

3208 (636 CID) Swivel style heater





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602549	1000	120	3/4" NPT	Immersion	3600008
8602514	1000	**240**	3/4" NPT	Immersion	8608377
8602611	1500	120	3/4" NPT	Immersion	3600008
8602573	1500	**240**	3/4" NPT	Immersion	8608377

Installation Information: Replaces 3/4" pipe plug on Front of engine.

3304 (with oil cooler), 3306 (638 CID)



3304



3306



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600988	1000	**240**	3/4" NPT	Immersion	8608377
8601011	1500	120	3/4" NPT	Immersion	3600008
8601054	1500	**240**	3/4" NPT	Immersion	8608377

Installation Information: Replaces 3/4" pipe plug at Rear of oil cooler on Left Side of engine.

2006 & Newer C6.6



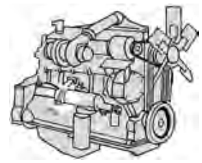
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500087	1000	120	1-1/4”	Freeze Plug	3600008

Installation Information: Install in right rear.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CATERPILLAR - Continued

3406 (Except 1998 models), **3406** (with BrakeSaver-through 1993 models), **3406E**
Not for use with 1998 3406E or 15.8L 600 hp engine.




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	**240**	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	**240**	1" NPT	Immersion	8608377
8605580	2000	120	1" NPT	Immersion	

Installation Information: Without BrakeSaver: Replaces 1" pipe plug in oil cooler rear bonnet (pictured).
With BrakeSaver: Install in front bonnet.

3406 (With BrakeSaver-1994 & newer)
Not for use with 1998 3406E or 15.8L 600hp models.



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008

Installation Information: Replaces 1" pipe plug in oil cooler, front bonnet.

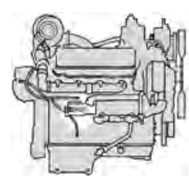
3406E, 3456, 15.8L (600 hp) **(1998 models only)**



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500033	1500	120	1" NPT	Immersion	
3500034	1500	120	1" NPT	HTR-Only	N/A

Installation Information: Installs in oil cooler rear bonnet. Not interchangeable with 8605556 for this application due to unique 1998 engine design.

3408 (1099 CID)




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	**240**	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	**240**	1" NPT	Immersion	8608377

Installation Information: Replaces 1" pipe plug behind oil cooler on Right cylinder bank.

3412 (12 cyl.)

(See Circulation Heater Section pages 74-77)

CHEVROLET

Forward & Tiltmaster, all gasoline engines

See Chevrolet Automotive/Light Truck gasoline applications - page 10.

CONTINENTAL (Teledyne)

F162, F163, Y112 (1981 & newer) 4 cyl.



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100053	400	120	1-5/8"	Freeze Plug	3600006

Installation Information:
Install in any Left Side (LS). Point element UP. Note: Heater for cup-type core hole only.

TM27, TMD27 4 cyl.



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100060	400	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in any Right Side (RS). Point element UP.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CONTINENTAL (Teledyne) - Continued

F227, F245 (1979 & newer)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100053	400	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in any Left Side (LS). Point element UP.

F227, F245 (1979 & newer - alternate wattage)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100057	600	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in any Left Side (LS). Point element UP.

CUMMINS

2007 & Newer, ISX, QSX (Beginning July 2007)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500107	1500	120	26mm	Immersion	3600008

Installation Information: Install in Right Side (RS).

Signature 600, ISX, APEX



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500108	1500	**240**	Plate	Immersion	8608377

Installation Information: Remove flat 2 - bolt cover on right side of block, near rear of water inlet casting. Install with element pointing toward front of engine. Re-use gasket from cover. NOTE: gasket not supplied.

Signature 600, ISX, QSX (15L - 915 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500038	1500	120	Plate	Immersion	3600008

Installation Information: Install in Right Side (RS). ***Reuse gasket from plate that was removed.*** Gasket not included.

N Series (855 CID-14 litre NT315, N14-330, N14-330E, N14-460, N14-460, etc.)
Big Cam IV, New Big Cam IV, 88NT, 444
(Engines without heater hose connection to rear plate or Full Flow Cooling)

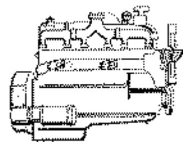
Replaces water jacket access plate



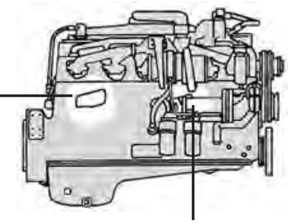
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601003	1000	120	Plate	Immersion	3600008
8601046	1500	120	Plate	Immersion	3600008
8601062	1500	**240**	Plate	Immersion	8608377

Installation Information:

Due to oil cooler provisions on 855 CID series engines, special applications which accommodate full flow cooling designs are necessary. Where there is interference,the heater required will depend upon the oil cooler and exhaust configuration. Thevarious installation options are shown here. Also see alternate installation below. Engine may accept oil pan heaters 8609683, 8609659, or 8609713 (requires 1" x 1/2" reducer bushing to reduce port size). See page 70 for oil pan heater specifications.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)



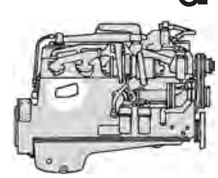
Engines without FULL FLOW COOLING - replaces Front or Rear water jacket access plate.



BIG CAM III, IV, New BIG CAM IV, 88NT & N14 install here

BIG CAM IV with heater hose connection to rear plate & pre-88NT engines install here

N Series, Big cam IV, New Big Cam IV, 88NT (alternate installation)
(Engines with one heater hose connection (1/2" NPT) to Rear plate.





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601526	1500	120	Plate	Immersion	3600008

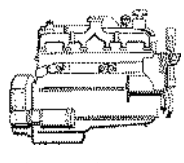
Installation Information: Replaces Rear access plate. Heater includes 1/2" NPT port for hose connection.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CUMMINS - Continued

New Big Cam IV

(Forward plate installations with reverse bolt pattern - without single-pass oil cooler 1986-1988)



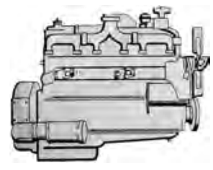


Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600627	1500	120	Plate	Immersion	3600008
8600651	1500	**240**	Plate	Immersion	8608377

Installation Information: Replaces forward side plate. Available Service Parts: Hex Nut (8602999), Plate Gasket (8603715).

855 CID (alternate installation)

(Rear plug location without aftercooler water connection.
Recommended as alternate location for cab-over vehicles only)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500036	1500	120	1-1/2" NPT	Immersion	3600008

Installation Information: Replaces 1-1/2" pipe plug on Rear face of engine, right side (above flywheel housing).

855 CID (alternate installation)

(1996 & newer engines with O-ring seal)

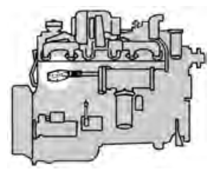


Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500023	1500	120	1-5/8" STOR	Immersion	3600008

Installation Information:
Replaces 1-5/8" plug on Rear face of engine, right side (above flywheel housing).

855 CID (engines with full flow cooling, high-mount oil cooler)

(Uses hose and two clamps for water tube connection to casting.
Most engines manufactured from August 1975 to June 1982)





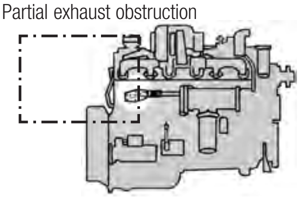
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601100	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)

855 CID (engines with full flow cooling, high-mount oil cooler-obstruction)

(Connected to Rear port which is partially blocked by exhaust)

Partial exhaust obstruction





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608741	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine.
Available Service Parts: Plate Gasket (8603359)

855 CID (engines with full flow cooling, high-mount oil cooler - O-ring)

(Uses O-ring for water tube connection. Engines only produced prior to 1975)

Use Circulation heater.

855 CID (replacement element for existing 8602379 heater)

(Does NOT include casting. Cordset is included)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602301	1500	120	Plate	Immersion	3600008

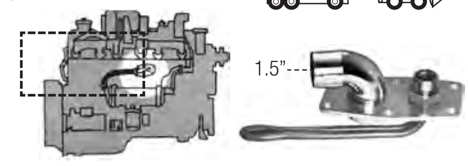
Installation Information: Replaces heating element in casting.
Available Service Parts: Hex Nut (8602999), Plate (8603138), Gasket (8603383)

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CUMMINS - Continued

855 CID (engines with full flow cooling, low-mount oil cooler)
(Connected to Front port, Rear port blocked by exhaust)

Complete exhaust obstruction



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608709	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8603359)

QSB (4.5L) Hot Side
2005-2006 ISB 02 200 HP




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500096	750	120	58mm	Freeze Plug	3600008

Installation Information:
Replace freeze plug opening on Right front side of engine.
Must have threaded bolt holes in block for attaching mounting plate.

1987-2002 B Series: 4B3.9 & 4BT3.9 (3.9L 239 CID 4 cyl.) (Through model year 2002)
6B5.9 & 6BT5.9 (5.9L 359 CID 6 cyl.)




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500030	750	120	58mm	Freeze Plug	3600008
8601666	750	**240**	58mm	Freeze Plug	8608377

Installation Information:
Replaces freeze plug on Right side on engine.
Available Service Parts: O-ring and clamp device (3500002)

ISB: 2007 & newer (5.9L, 6.7L)
QSB (3.9L, 4.5L, 5.9L, 6.7L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500022	750	120	3/4" NPT	Immersion	3600008
3500110	750	**240**	3/4" NPT	Immersion	8608377

Installation Information: Installs in 3/4" NPT port to Rear of oil cooler.

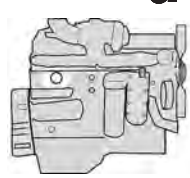
B 3.3T (3.3L), QSB (3.3)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100046	400	120	40mm	Freeze Plug	3600006

Installation Information: Installs in Left Rear (LR).

C Series: 6C8.3 & 6CT8.3 (8.3L 505 CID), 6CTA8.3




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601860	1000	120	58mm	Freeze Plug	3600008
8601852	1000	**240**	58mm	Freeze Plug	8608377

Installation Information:
Replaces freeze plug on Right rear side of engine.
Available Service Parts: O-ring and clamp device (3500002)

ISC, QSC Series (8.3L 505 CID), ISL Series (8.9L 543 CID)



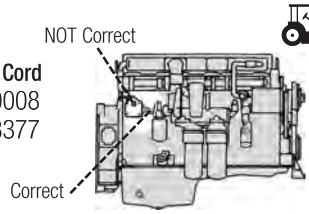
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500032	1000	120	3/4" NPT	Immersion	3600008
3500155	750	120	3/4" NPT	Immersion	3600008

Installation Information:
Installs in upper 3/4" NPT port, to front of oil cooler.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CUMMINS - Continued

L10 (10L 611 CID 6 cyl.), **M11, ISM Series, QSM11**

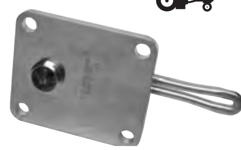




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600015	1500	120	38mm THUD	Immersion	3600008
8600031	1500	**240**	38mm THUD	Immersion	8608377

Installation Information:
Install in heater casting on Right rear side of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

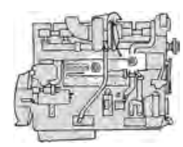
M11 (11L) (2000 and newer)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500042	1500	120	Plate	Immersion	3600008
3500109	1500	**240**	plate	immersion	8608377

Installation Information:
Install on Right rear side of engine.

K Series (KT19, KT450, KT1150, KTA525 - 1150 CID 6 cyl.), **QSK Series**

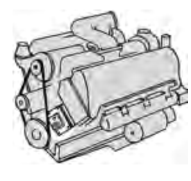




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500017	1500	120	1-3/4"-18 THUD	Immersion	3600008

Installation Information:
Replaces large hex plug at either upper front or center thread position on oil cooler cover. Point element 6 o'clock or 12 o'clock position. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

V903, VT903, VT350, Formula VT300 (903 CID)
V6-195, 200, 215, 280 (588 CID)
V8-235, 265, 300, 370 785 CID), 350 & 430 (950 CID)
(Replacement element only)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8607605	1500	120		Immersion	3600008

Installation Information:
Replacement element only. Circulation heater is acceptable alternative.

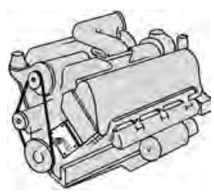
V903, VT903, VT350, Formula VT300 (903 CID) **(Alternate installation)**



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601267	1500	120	3/4" NPT	Immersion	3600008
8601054	1500	**240**	3/4" NPT	Immersion	8608377

Installation Information: Replaces 3/4" pipe plug at bottom rear of oil cooler.
Check engine to be sure 3/4" pipe plug is available on engine before proceeding.

V6-140 (352 CID), **V6-155** (378 CID)
(Engines without alternator mounted over water jacket access plate)



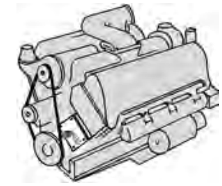


Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601763	1000	120	Plate	Immersion	3600008
8601801	1000	**240**	Plate	Immersion	8608377
8601844	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on front left cylinder bank. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

CUMMINS - Continued



170 & 185 (470 CID), **210** (504 CID), **VT225, V555, VT555** (555 CID)
(Engines without alternator mounted over water jacket access plate)

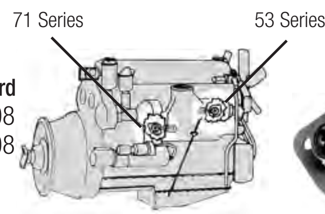
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601763	1000	120	Plate	Immersion	3600008
8601801	1000	**240**	Plate	Immersion	8608377
8601844	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on front left cylinder bank. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650).
If Cummins 504CID has alternator, uses International Bracket part # 3549687C1.

C & J 160, 175 & 190 (464 CID)
Use Circulation heater.

DETROIT DIESEL

3-53, 4-53, 3-71, 4-71
(Engines without water cooled compressor)

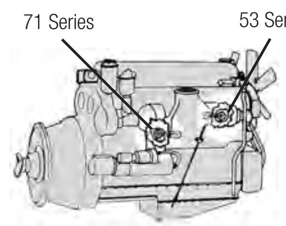




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600295	750	120	Plate	Immersion	3600008
8600368	1000	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine.
Note: Do not use 1000 watt heater on 3-53, 4-53, or 3-71 engines.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

3-53, 4-53, 3-71, 4-71
(Engines with water cooled compressor)

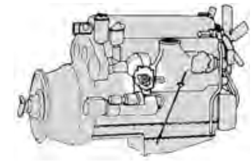




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601291	750	120	Plate	Immersion	3600008
8601305	1000	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine.
Note: Do not use 1000 watt heater on 3-53, 4-53, or 3-71 engines.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

6-71
(Engines without water cooled compressor)

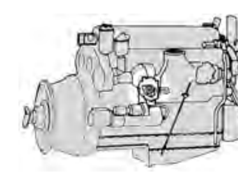




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600368	1000	120	Plate	Immersion	3600008
8600422	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

6-71
(Engines with water cooled compressor)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601305	1000	120	Plate	Immersion	3600008
8601372	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

6V-53
(Vehicles with or without automatic transmission)





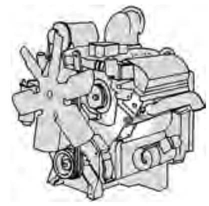
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500021	1000	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on side of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

DETROIT DIESEL - Continued

6V-71, 8V-71 (Vehicles without power steering and/or air conditioning)




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	**240**	1" NPT	Immersion	8608377
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	**240**	1" NPT	Immersion	8608377

Installation Information: Replaces 1" pipe plug on front face of Left cylinder bank.

8.2 Litre (501 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600996	1000	**240**	3/4" NPT	Immersion	8608377

Installation Information: Replaces 3/4" pipe plug on Right front side of engine.

8V-53

Use 1500 or 2250 Watt Circulation heater.

D638 (3.8L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8604967	600	120	3/4" NPT	Immersion	N/A

Installation Information: Install in Right Side (RS) of engine.

Series 30



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007

Installation Information: Install in Right Side (RS). Point element UP.

Series 40 (466 CID) (Engines manufactured prior to September 1993)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608512	1250	120	1-1/4"	Freeze Plug	3600008
8608539	1250	**240**	1-1/4"	Freeze Plug	8608377

Installation Information: Replaces 3rd or 4th freeze plug on Left side of engine.
Available Service Parts: O-ring and clamp device (3500004)

Series 40 (6.7L 408 CID, 7.6L 466 CID, 8.7L 530 CID)

(Engines manufactured after August 1993)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500044	1250	120	1-1/4"	Freeze Plug	3600008
8608911	1250	**240**	1-1/4"	Freeze Plug	8608377

Installation Information: Replaces 1-1/4" plug in boss on Left side of engine.

Series 50 (Except low-mount turbo)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8605556	1500	120	1" NPT	Immersion	3600008

Installation Information: Replaces 1" NPT plug in oil cooler casting. Engine may also accept oil pan heater 8603243.
See threaded immersion heater page for specifications.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

DETROIT DIESEL - Continued

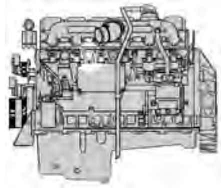
Series 50
(Including low-mount turbo)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500007	1000	120	1-1/2"	Freeze Plug	3600008



Installation Information: Install in core plug behind oil cooler. Engine may also accept oil pan heater 8603243. See threaded immersion heater page for specifications.

Series 55




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500008	1500	120	Plate	Immersion	3600008
3500009	1500	**240**	Plate	Immersion	8608377

Installation Information: Replaces water jacket access plate on Left side of engine.

DD13, DD15, DD16 (2008 & Newer)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500095	1500	120	27mm	Immersion	3600008

Installation Information: Right side. M27 port in the oil module below intake.

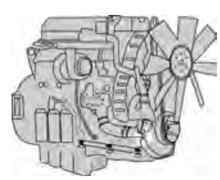
Series 60 (2007 & Newer)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500077	1500	120	1-3/16" STOR	Immersion	3600008

Installation Information: Upper hex port of oil cooler. Right side of engine.

Series 60 (11.1L 677 CID, 12.7L 775 CID)

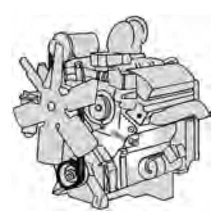



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	**240**	1" NPT	Immersion	8608377
8605580	2000	120	1" NPT	Immersion	

Installation Information: Pre 1991 engines - Replaces 1" NPT plug in water pump outlet casting on Right front side of engine. 1991 & Newer replaces 1" pipe plug near top front of oil cooler. May also accept oil pan heater 8603243. See threaded immersion heater page for specifications.

Silver Series (6V-92, 8V-92),

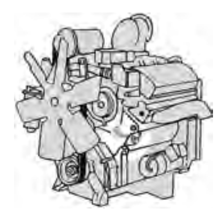
6V-71, 8V-71, 12V-71, 16V-71, 6V-92, 8V-92, 12V-92, 16V-92
(Engines without air conditioner compressor mounted next to water jacket access plate)




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601631	1000	120	Plate	Immersion	3600008
8601704	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on Left front cylinder bank. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650), Plate Gasket (8606854).

6V-71, 8V-71, 12V-71, 16V-71, 6V-92, 8V-92, 12V-92, 16V-92
(Engines with air conditioner compressor mounted next to water jacket access plate, except for GMC General with 92 Series engine)




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601658	1000	120	Plate	Immersion	3600008
8601712	1500	120	Plate	Immersion	3600008

Installation Information: Replaces water jacket access plate on Left front cylinder bank. Available Service Parts: Hex Nut (8602999), Plate Gasket (8606854).

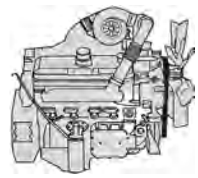
Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

DETROIT DIESEL - Continued



Silver Series (6V-92, 8V-92), 12V-71, 16V-71, 12V-92, 16V-92, GMC General (with 92 Series engine)

(Alternate installation)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8602514	1000	**240**	3/4" NPT	Immersion	8608377
8602611	1500	120	3/4" NPT	Immersion	3600008
8602573	1500	**240**	3/4" NPT	Immersion	8608377

Installation Information: Replaces 3/4" pipe plug in oil cooler elbow on right side of engine. Check engine carefully - 3/4" pipe plug not available on all engines. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

DEUTZ



F3L912, F3L913 (3 cyl)

(Oil pan heater only)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603146	150	120	48mm THUD	Immersion	3600024

Installation Information: Replaces 48mm plug in oil pan. Check engine carefully - 48mm plug not available on all oil pans. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)



BF4L913 (4 cyl.)

(Oil pan heater only)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603170	325	120	48mm THUD	Immersion	3600024

Installation Information: Replaces 48mm plug in oil pan. Check engine carefully - 48mm plug not available on all oil pans. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)



F6L913, BF6L913 (6 cyl.)

(Oil pan heater only)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603170	325	120	48mm THUD	Immersion	3600024

Installation Information: **Dual kit - purchase two heaters and cordsets.** Replaces 48mm plugs in oil pan. Check engine carefully - 48mm plugs not available on all oil pans. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)



1012, 1013, 2013



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500019	750	120	Plate	Immersion	3600020

Installation Information: Install in oil cooler housing. Check engine - heater port not available on all engines.

FAHR



1012, 1013, 2013



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500055	750	120	Plate	Immersion	3600008

Installation Information: Install in oil cooler housing. Check engine - heater port not available on all engines. Available on all oil pans. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

Agricultural, HD, Off Road & Industrial

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

FIAT

8060, 8061, 8065 (5.5L 335 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600333	1000	120	42mm THUD	Immersion	3600008

Installation Information: Install in 42mm threaded opening on Right rear of engine.
Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

8360, 8361 (8.1L 494 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600090	1000	120	1" NPT	Immersion	3600008
8600120	1000	**240**	1" NPT	Immersion	8608377

Installation Information: Replaces 1" pipe plug in coolant elbow casting on Front left side.

FORD

KSG411 (67 CID 4 cyl.), **KSG416** (98 CID 4 cyl.)
(Engines with distributor)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100053	400	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in Left Side (LS). Point element UP/DOWN.

VSG411 (67 CID 4 cyl.), **VSG413** (79 CID 4 cyl.)
(Engines without distributor)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100085	400	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 3 o'clock.

091PV (91 CID 4 cyl.), **GSG417** (104 CID 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100036	400	120	1-1/2"	Freeze Plug	3600003

Installation Information: Install in Right front face of cylinder head. Point element UP or DOWN.

134, 172, 192 CID (Engines used in tractors)
NAA, NAB, 500, 600, 700; 800, 900, 901, 1800 G/D;
2000, 2100, 4000 G/D, 4110D, 4120, 4121



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100087	600	120	2.06"	Freeze Plug	3600006

Installation Information: Install in any Left Side (LS). Point element UP or DOWN.

2000, 3000, 4000, 5000, 6000 (3, 4, 6 cyl.)
(Engines manufactured up to 1967)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047

Installation Information: Lower radiator hose heater. Circulation heater is acceptable alternative.

3000, 4000, 5000, 8000, 9000 Series
(Engines manufactured 1968-1970)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in 4th & 5th Right Side (RS). Two heaters required.
Point element DOWN. Circulation heater or LRHH are acceptable alternative.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

FORD - Continued

3000, 4000, 5000, 7000, 8000, 9000 Series
(Engines manufactured in 1971 and later)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100112	750	120	1-1/2"	Freeze Plug	3600023

Installation Information: Install in 4th and 5th Right Side (RS). Two heaters are required. Point element DOWN. Circulation heater or LRHH are acceptable alternatives.

LSG423 (140 CID 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in Right rear. Point element UP/DOWN.

LRG423 (140 CID 4 cyl.), **LRG425** (152 CID 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100084	400	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 3 o'clock.

DSD & ESD442 (254 CID 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036

Installation Information: Install in Left Center (LC). Point element UP.

LSG633 (200 CID 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Right Front (RF) or Right Center (RC). Point element UP or DOWN.

CSG649 (300 CID 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100054	600	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install 2nd Right Side. Point element UP.

SSD655 (335 CID 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600333	1000	120	42mm THUD	Immersion	3600008

Installation Information: Install in Right Rear (RR). Point element UP/DOWN.

DSD & ESD659 (362 CID 6 cyl.), **660** (363 CID 6 cyl.), **680** (380 CID 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036

Installation Information: Install 2nd and 3rd Left side. Point element UP or DOWN. Two heaters are recommended.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

FORD - Continued

BSD666 (401 CID 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100112	750	120	1-1/2"	Freeze Plug	3600023

Installation Information: Install in 4th and 5th Right side. Point element DOWN. Two heaters are recommended.

WSG858 (351W V-8), 255 (V-8), 302 (V-8)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR) or Right Rear (RR). Point element DOWN.

LSG861 (370 CID V-8), LSG870 (429 CID V-8), LSG875 (460 CID V-8)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in Right Side (RS) or Left Side (LS). Point element UP.

401 CID (V-8), 477 CID (V-8), 534 CID (V-8)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601518	1000	120	1-3/4"	Freeze Plug	3600008

Installation Information: Install in any 1-3/4" freeze plug.

6.6L (401 CID), 7.8L (474 CID)
(Engines manufactured in August 1989 and later featuring plate type heater)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500048	1000	120	Plate	Immersion	3600008
8606331	1250	120	Plate	Immersion	3600008

Installation Information: Replaces 2nd freeze plug from rear - right side. (Diameter of element in plate 1.5")

6.6L (401 CID), 7.8L (474 CID)
(Engines manufactured prior to August 1989 featuring freeze plug type heater)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
2207044	1000	120	1-1/2"	Freeze Plug	3600008
8601984	1500	120	1-1/2"	Freeze Plug	3600008
8601968	1500	**240**	1-1/2"	Freeze Plug	8608377

Installation Information: Replaces 2nd freeze plug from rear - right side.

1060 (5.9L 359 CID 6 cyl. - Cummins B Series)



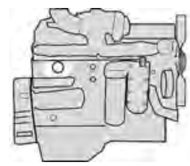
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500030	750	120	58mm	Freeze Plug	3600008
8601666	750	**240**	58mm	Freeze Plug	8608377

Installation Information: Replaces freeze plug on Right side of engine. Available Service Parts: (O-ring & clamp device kit (3500002).

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

FORD - Continued

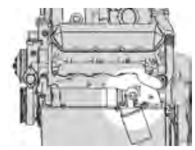
1460 (8.3L 505 6 cyl. - Cummins C Series)




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8601860	1000	120	58mm	Freeze Plug	3600008
8601852	1000	**240**	58mm	Freeze Plug	8608377

Installation Information: Replaces freeze plug on Right rear side of engine.
Available Service Parts: O-ring & clamp device kit (3500002)

7.3L (445 CID V-8 - Navistar T444E engine)




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600996	1000	**240**	3/4" NPT	Immersion	8608377
8602611	1500	120	3/4" NPT	Immersion	3600008

Installation Information: Replaces 3/4" NPT threaded plug in oil cooler.

6.9L (421 CID V-8), **7.3L** (445 CID V-8)
(Except Navistar T444E engine)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100043	1000	120	1-1/2"	Freeze Plug	3600010

Installation Information: Replaces freeze plug on Right rear of engine. Point element 11 o'clock.

HERCULES

G1600 (2.7L 163 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100088	400	120	2.135"	Freeze Plug	3600006

Installation Information: Install in Left Center (LC) or Left Rear (LR). Point element UP or DOWN.

G/D3400 & 3400T (339 CID)
(Engines manufactured up to 1982)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100039	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Replaces freeze plug on Right side of engine.

G/D2300, DT3.7 (226 CID), **5.8L** (339 CID), **G/D3400** (1983+ engines), **GT & DT 5.6**



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100027	600	120	35mm	Freeze Plug	3600006

Installation Information: Replace freeze plug on Right side of engine.

G/D4800 (7.8L 478 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500025	1000	120	2"	Freeze Plug	3600024

Installation Information: Replaces freeze plug on Right side - near rear.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

HINO

W04C, W06E, H06C-T, H07C-B (3.8L, 5.7L, 6.0L, 6.4L, 6.7L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600988	1000	**240**	3/4" NPT	Immersion	8608377

Installation Information: Replaces 3/4" plug in water transfer casting/oil cooler cover.

J Series: J05C (5.3L 4 cyl.), J08C (8.0L 6 cyl)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500018	1000	120	50mm	Freeze Plug	3600008

Installation Information: Replace core plug on Right front side of engine.

INTERNATIONAL / NAVISTAR

Cub Lo-Boy



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047

Installation Information: Lower radiator hose heater. Circulation heater is acceptable alternative.

460, 560, 660, 706, TD62, TD92 (All models)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036

Installation Information: Install in 3rd Right Side (RS). Point element DOWN, if no interference w/throttle rod. Use 12 o'clock for other installations. Circulation heater or LRHH are acceptable alternatives.

806, 1206, 1256 (1963-67), 856, C152, C175, C200, C221, C263, C282, C291, C301, D166, D188, D236, D282, D301, D361, D407, DT407

(Can be used on gas or diesel engines)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100061	600	120	1-5/8"	Freeze Plug	3600036

Installation Information: Install in 1st, 2nd, or 5th freeze plug on Right side. Point element DOWN. Circulation heater or LRHH are acceptable alternatives.

504 (153G), 606 (221G)

(Engines manufactured in 1964 and later)
(Can be used on gas or diesel engines)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100054	600	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in Right Center (RS). Point element DOWN. Circulation heater is acceptable alternative.

966, 1066, 1086, 1466



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information: Installs in 3rd and 4th Left Side (LS). Two heaters required. Circulation heater is acceptable alternative.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

INTERNATIONAL / NAVISTAR - Continued

966, 1066, 1086, 1466
(Alternate installation)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608512	1250	120	1-1/4"	Freeze Plug	3600008

Installation Information: Install in Left side.

MV, 404, 446, 485 engines



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100044	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Install in any Left Side (LS) or Right Side (RS). Point element between cylinders. Circulation heater is acceptable alternative.

All with Neuss engine (179, 206, 239, 246, 268, 310, 358 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500012	1000	120	1-1/4"	Freeze Plug	3600024

Installation Information: Install in Left Side (LS). Circulation heater is acceptable alternative (see pages 71-73).

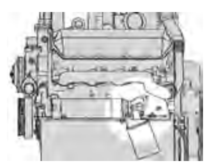
6.9L (421 CID), 7.3L (445 CID)
(Not for use with T444E engine)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100043	1000	120	1-1/2"	Freeze Plug	3600010

Installation Information: Replaces freeze plug on Right rear of engine. Point element 11 o'clock. Available Service Parts: O-ring and clamp device (3500005)

T444E (7.3L V-8)
(Engines manufactured in 1994 and later)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600996	1000	**240**	3/4" NPT	Immersion	8608377

Installation Information: Replaces 3/4" threaded plug in oil cooler.

D150, D170, D190 (461 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100038	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Replaces any freeze plug. Point element UP.

D312, D414, DT414, D436, DT436, DTA466
(Engines manufactured prior to 1994)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608512	1250	120	1-1/4"	Freeze Plug	3600008
8608539	1250	**240**	1-1/4"	Freeze Plug	8608377

Installation Information: Replaces 3rd or 4th freeze plug on Left side of engine.

2001-2003 DT466 High Torque, DT466, DT466E, HT530, DT530



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500054	1250	120	1-1/4"	Immersion	3600008

Installation Information: Left side, protruding boss above engine oil dipstick. Element direction 12 o'clock

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

INTERNATIONAL / NAVISTAR - Continued

2004-2006 DT466 & DT570
1994-2000 DT408, DT466, DT466E, 530, 570




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500044	1250	120	1-1/4"	Freeze Plug	3600008
8608911	1250	**240**	1-1/4"	Freeze Plug	8608377

Installation Information: Replaces 1-1/4" freeze plug in boss on Left side of engine.

2007 & Newer MaxxForce DT, MaxxForce 9 & 10




Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500098	1250	120	1-1/4"	Freeze Plug	3600008

Installation Information: Replaces 1-1/4" freeze plug in boss on Left side of engine.

D550 (549 CID), **9L** (551 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100044	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Replace any freeze plug. Point element between cylinders.

DT360, DTA360



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8608601	1000	120	1-1/4"	Freeze Plug	3600008

Installation Information: Replace 3rd or 4th freeze plug on Left side of engine.

V800 (798 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8605556	1500	120	1" NPT	Immersion	3600008
8600260	1500	**240**	1" NPT	Immersion	8608377

Installation Information: Replace 1" pipe plug in oil cooler bonnet.

2007 & Newer, MaxxForce 5 & 7
VT365, VT275



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500069	1000	120	27mm THD	Immersion	3600008

Installation Information: Right rear.

817 (817 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600759	1500	120	1-1/2" NPT	Immersion	3600008

Installation Information: Replace 1-1/2" pipe plug on side of engine.

400, 500, 600, 700, 900

(Engines built in 1986 and later)

See UD Truck listings - page 67-68.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

INTERNATIONAL / NAVISTAR - Continued

MaxxForce 11 & 13



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500095	1500	120	27mm THD	Immersion	3600008

Installation Information: Lower right front.

MaxxForce 15



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500038	1500	120	Plate	Immersion	3600008

Installation Information: Install Right side.

ISUZU

4BD1 (3.9L 4 cyl.), **6BD1** (5.8L 6 cyl.), **6BG1** (6.5L 6 cyl.), **6HE1** (7.1L 6 cyl.), **6HK1** (7.8L), **6SA1** (8.4L 6 cyl.)

Heavy Duty Applications



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100089	600	120	1" NPT	Immersion	3600006

Installation Information: Installs in Left rear 1" threaded opening, except for 6SA1, which installs in Right side 1" threaded opening. Two heaters recommended for 6SA1.

4BD1 (3.9L 4 cyl.), **6BD1** (5.8L 6 cyl.), **6BG1** (6.5L 6 cyl.), **6HK1** (7.1L 6 cyl.), **6SA1** (8.4L 6 cyl.) **QD-100** (3.9L), **QD-145** (5.8L), **4BGI, 4BGIT, 4BGITC**

Industrial Applications



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	45mm	Freeze Plug	3600006

Installation Information: Replaces 45mm freeze plug in the back of head. Install element 1 o'clock.

2 Cylinder: QD-27 (2AB1), **QT-15** (2KC1), **2AA1**



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	45mm	Freeze Plug	3600006

Installation Information: All except QT-15: Install Left Side (LS). Point element UP.
QT-15: Install in back of head. Point element 10 o'clock.

3 Cylinder: QD-40 (3AB1 108 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100068	400	120	45mm	Freeze Plug	3600006

Installation Information: Install in Left Side (LS). Point element 6 o'clock.

3 Cylinder: QT-23 (3KC-1 87 CID), **QT-35** (3KR-1-60 87 CID), **3AA**



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	45mm	Freeze Plug	3600006

Installation Information: All except 3AA: Install in back of head. Point element 10 o'clock. 3AA: Install in Left Side (LS). Point element 6 o'clock.

QT-23 (3KC-1)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100026	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 9 o'clock.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

ISUZU - Continued

3LD1 & 3LD2 (3 cyl.), 4LE1 & 4LE2 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100094	400	120	35mm	Freeze Plug	3600005

Installation Information: Install in any Left side. Point element 9 o'clock.

3LB1 (3 cyl.), 4LC1 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100098	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in any Left side. Point element 9 o'clock.

QD-60, C240, C201, C223 (144, 137 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100068	400	120	45mm	Freeze Plug	3600006

Installation Information: Install in Left Side (LS). Position element 6 o'clock.

QD-90, 4BB1 (219 CID 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	45mm	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 1 o'clock. Not for use on Isuzu 4JJ engines.

4FB1 (111 CID 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100018	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Right Rear (RR). Point element UP.

4H Series



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500151	600	120	45mm	Freeze Plug	3600008

Installation Information: Replace 45mm core plug between #1 & #2 cylinder near alternator. Point element down.

4JB1, 4JG (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100069	400	120	45mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 6 o'clock.

QD-130 (6BB1 329 CID 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	45mm	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 1 o'clock. Not for use on Isuzu 4JJ engines.

6SA1, 6SA1-T, 6SD1, QD-170 & QD-170T (8.4L 6 cyl.)

Use circulation heater.

E-120 (733 CID 6 cyl.), 6RB-1 (839 CID 6 cyl.)



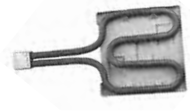
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602220	1250	120	45mm	Freeze Plug	3600008

Installation Information: Replace 45mm plug on Rear face or back - right side. Point element DOWN.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

IVECO

Z100 (F5L-912 Deutz air cooled engine)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3400014	500	120	6" x 6" (15.2cm^2)	Clamp-on	3600001

Installation Information:
Clamp-on type heater. Engine may also use 22mm threaded oil pan heater - see page 70.

Z110, Z120, Z220, Z340 (335 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600333	1000	120	m42 x 1.5	Immersion	3600008

Installation Information: Install in 42mm threaded opening on Right rear of engine. Available Service Parts: Hex Nut (8602999), Plate Gasket (8603650)

JOHN DEERE

ALL 50, 60, 70, 730 Series A, B, D, G



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in bottom of water jacket. Circulation heater is acceptable alternative.

3029



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Replaces 3/4" pipe plug on rear face of engine.

All 4230, 4430, 4440, 4630, 6030, 7020, 7520

(Tractors manufactured prior to 1976 without large hex plug)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602050	1000	120	2"	Freeze Plug	3600024

Installation Information: Install in Left Side (LS). Point element UP. Circulation heater is acceptable alternative.

6404, 6466, 6619

(Engines featuring smooth bore core hole - engines manufactured prior to 1976)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602050	1000	120	2"	Freeze Plug	3600024

Installation Information: Replace 2" diameter core hole on Left side of engine.

2010



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200003	600	120	1-1/2"	LRHH	3600047

Installation Information: Lower radiator hose heater. Circulation heater is acceptable alternative.

1020, 2020, 3010, 3020, 4000, 4010, 4020



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200004	600	120	1-3/4"	LRHH	3600047

Installation Information: Lower radiator hose heater. Circulation heater is acceptable alternative.

All tractors (manufactured 1977 and later featuring large hex plug on side of engine)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500029	1000	120	1-5/8" THUD	Immersion	3600008

Installation Information: Install in Left Side (LS). Point element UP. Circulation heater is acceptable alternative.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

JOHN DEERE - Continued

Power Tech: 4045, 6068



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500020	1000	120	1-5/8" THUD	Immersion	3600008

Installation Information: Replace 1-5/8" threaded plug on Right side of engine.

6105, 6125



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500013	1500	120	1" NPT	Immersion	3600008

Installation Information: Installs in oil cooler housing.

Series 250 PowerTech: 4024 PowerTech (2.4L, 4 Cyl.) & 5030 PowerTech (3.0L, 5 Cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500089	600	120	1.25”	Freeze Plug	N/A

Installation Information: Replace 1.25" diameter core hole on Left side of engine, near the starter.

Series 300 (3164, 3179, 4039, 4045, 4219, 4239, 4276, 6059, 6068, 6329, 6359, 6414)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8603596	1000	120	3/4" NPT	Immersion	3600024

Installation Information: Replace 3/4" pipe plug on rear face of engine. Some engines (manufactured in 1987 and later) may require a 1" x 3/4" reducer bushing.

Series 300: 3164, 4039, 4045, 4219, 4239, 4276, 6329, 6359, 6414, 6059, 6068
Series 400: 6076, 6081, 6101, 6414, 6466, 6619



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500029	1000	120	1-5/8" THUD	Immersion	3600008

Installation Information: Replaces 1-5/8" threaded plug on Left side of engine.

Series 300 (3029, etc.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500045	1000	120	1" NPT	Immersion	3600008
3500152	1000	240	1" NPT	Immersion	8608377

Installation Information: Install in Left rear face of block.

Series 350 PowerTech Plus iT4 (Interim Tier 4): 4045 PowerTech Plus iT4 (4.5L, 4 Cyl.) & 6068 PowerTech Plus iT4 (6.8L, 6 Cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500069	1000	120	27mm	Immersion	3600008

Installation Information: Right Rear

KOMATSU

SA6D107



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100046	400	120	40mm	Freeze Plug	3600006

Installation Information: Replace 40mm core plug.

SA6D125 (624 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600880	1500	120	1-3/4" THD	Immersion	3600008
8600813	1000	120	1-3/4" THD	Immersion	3600008

Installation Information: Replaces threaded core plug on Right side of engine.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

KOMATSU - Continued

S4D106-1



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1” NPT	Freeze Plug	3600001

Installation Information: Install in left center.

S6D-95L & SA6D-95L (298 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100082	600	120	40mm	Freeze Plug	3600006
3100010	600	120	30mm	Freeze Plug	3600005

Installation Information: 3100082: Install in Left Rear (LR). Point element UP. 3100010: Insert at 3 o’clock and rotate to 4 o’clock.

4D95 (2.9L 164 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100046	400	120	40mm	Freeze Plug	3600006

Installation Information: Replace 40mm core plug on Left rear of engine. Note: May not fit all engines due to block thickness. Maximum 5/18” (15.8mm) thickness.

S6D140, SA6D140

(Example: WA500 loader)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8605602	1500	120	1-3/8"	Immersion	3600008
8600880	1500	120	1-3/4" THD	Immersion	3600008



(8600880)



(8605602)

Installation Information:
8605602: Replace 3rd core plug on right side of engine. 2001 and newer used 8600880: Replaces threaded core plug on right side of engine.

S6D170, SA6D170

(Example: WA600 loader)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602301	1500	120	Plate	Immersion	3600008

Installation Information: Install in rectangular water jacket access plate (6-bolt) located on the Right side of engine - rear. Requires removal of engine side plate and hole to be drilled for heater installation.

KUBOTA

M Series (3 & 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in front.

B Series

(Except 2 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in Right Front (RF). Use 1" x 3/4" pipe bushing.

L Series



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in Right Front (RF). Use 1" x 3/4" pipe bushing.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

KUBOTA - Continued

Z400, Z482, D722
(Super Mini/New Super Mini 2 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100099	400	120	30mm	Freeze Plug	3600004

Installation Information: Install in back of head.

Z600 & ZH600
(Super Mini/New Super Mini 2 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install Right Front (RF). Use 1" x 3/4" pipe bushing.

D600, D640, WG600, D662, D722, DG750, DF750, WG750
(Super Mini/New Super Mini 3 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100099	400	120	30mm	Freeze Plug	3600004

Installation Information: Install in back of head.

V800
(Super Mini/New Super Mini 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100099	400	120	30mm	Freeze Plug	3600004

Installation Information: Install in back of head.

D905, DH905, D1005, DH1005, D1105, V1205, VH1205, V1305, VH1305, V1505
(Super 5 Series)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001

Installation Information: Install in Left Front (LF).

D3000B, D3200B (3 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001

Installation Information: Install in front.

D1102, D1302, D1402, D1403, D1703, D1803, D2203, D2403 (3 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100025	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 2 o'clock.

D650, D750, D850, DH850, D950 (3 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in Right Front (RF). Use 1" x 3/4" pipe bushing.

V4000B, V4300B (3 cylinder)
(3 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001

Installation Information: Install in front.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

KUBOTA - Continue

V1702, V1703, V1902, V1903, V2003, V2003T, V2203
(4 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100025	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 2 o'clock.

V3300



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in Right Front (RF). Use 1" x 3/4" pipe bushing.

V2607, V3307, V3600, V3800



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500120	400	120	1” NPT	Immersion	3600110

Installation Information: Replaces 1” NPT pipe plug.

S2800 (6 cyl.), **F2803** (5 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100025	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in back of head.

V1100, VH1100, V1200
(4 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Instructions: Install in Right Front (RF). Use 1" x 3/4" pipe bushing.

V1505



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600008

Installation Instructions: Install in open port closest to center of engine.

LISTER-PETTER

LPW Series (1994 & newer 56 CID 2 cyl., 85 CID 3 cyl., 113 CID 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100077	400	120	1-1/4"	Freeze Plug	3600004

Installation Information: Install between cylinders. Point element UP or DOWN.

LOMBARDINI

LDW602, LDW702 (2 cyl.), **LDW903, LDW1003** (3 cyl.), **FOCS Series 1204, LDW1404, LDW1204T** (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200002	375	120	1-1/4"	LRHH	3600047

Installation Information: Lower radiator hose heater.

CHD Series: LDW1503, LDW1603 (3 cyl.), **LDW2004, LDW2204, LDW2004T** (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100096	400	120	30mm	Freeze Plug	3600004

Installation Information: Install in Left Side (LS). Point element 3 or 9 o'clock.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

MACK

865 Series, 866 & 1000 Series, EM9-400 (998 CID), E9



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008
8600988	1000	**240**	3/4" NPT	Immersion	8608377
8601011	1500	120	3/4" NPT	Immersion	3600008
8601054	1500	**240**	3/4" NPT	Immersion	8608377

Installation Information: Installs in oil cooler casting. Two heaters are required. Engine may also accept oil pan heater 8609683, 8609659, 8609713 (requires 1" x 1/2" bushing to reduce port size). See threaded immersion heater page for specifications.

Midliner: E3 (5.5L 335 CID, 6.2L), E5 (8.8L 537 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600317	1000	120	Plate	Immersion	3600008
8600384	1500	120	Plate	Immersion	3600008
8600414	1500	**240**	Plate	Immersion	8608377

Installation Information: E3: Replace plug in rear face of block (MS200 serial numbers 1915 and higher).
E5: Install in oil cooler water feed pipe (MS300 serial numbers 60131 and higher). Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

E6 (672 CID 6 cyl.)

(Engines with smooth bore freeze plug. Example: EM6300, E6350, EM6237)





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8609748	1500	120	1-3/4"	Freeze Plug	3600008
8609772	1500	**240**	1-3/4"	Freeze Plug	8608377

Installation Information: Replaces 1-3/4" freeze plug on side of engine. Available Service Parts: O-ring and clamping device kit (3500003)

E6, EM6 (threaded freeze plug models manufactured prior to August 1981)
END465 (1957 & later), 711, EN438, 504, 707, 673, 675, 676 Series





Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600813	1000	120	1-3/4"	Immersion	3600008
8600880	1500	120	1-3/4"	Immersion	3600008
8600910	1500	**240**	1-3/4"	Immersion	8608377

Installation Information: Replaces 1-3/4" threaded plug on side of engine. Available Service Parts: Hex Nut (8602999), Element Gasket (8603650)

2004-2006 ASET Engine Series (AI, AC + AMI) (12.0L)
E7 & EM7 (12.0L) (Example: EM7-300, E7-350)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8607206	1500	120	1-3/8"	Freeze Plug	3600008
8607184	1500	**240**	1-3/8"	Freeze Plug	8608377

Installation Information: Replace 1-3/8" core plug on Right side of block - front or rear face. Available Service Parts: O-Ring (3600059) 10 pack.

END465 (1953-56), 672, 673, 711, EN438, 540, 707



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600759	1500	120	1-1/2" NPT	Immersion	3600008

Installation Information: Replace 1-1/2" pipe plug on side of engine.

E-Tech (water pump mount)



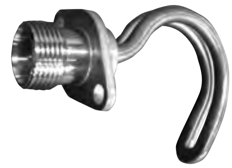
Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500051	1500	120	1-3/8"	Immersion	3600008
3500052	1500	**240**	1-3/8"	Immersion	8608377
3500070	1500	120	1-3/8"	Immersion	3600008

Installation Information : Mount in water pump. Available Service Parts: O-Ring (3600059) 10 Pack. 3500070 includes 84" weatherproof cord and receptacle.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

MACK - Continued

MP7 (10.8L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500099	1000	120	25mm	Immersion	3600085
3500100	1500	120	25mm	Immersion	3600085
3500101	1500	**240**	25mm	Immersion	3600086

Installation Information : Right rear

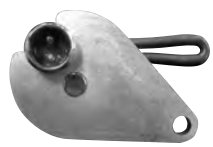
MP8 (12.8L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500102	1500	**240**	25mm	Immersion	3600086
3500115	1500	120	25mm	Immersion	3600085
3500104	1000	120	25mm	Immersion	3600085

Installation Information : Right front, in coolant pipe.

MP10 (16.1L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500105	1500	120	62mm	Immersion	3600085
3500106	1000	120	62mm	Immersion	3600085

Installation Information : Right front

MASSEY FERGUSON

All 445P, 333, 444, 555, 88



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100054	600	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in Right Front (RF). Circulation heater is acceptable alternative.

1100



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3200005	600	120	2"	LRHH	3600047

Installation Information: Lower radiator hose heater. Circulation heater is acceptable alternative.

All MF-35, 40, 50, 150, 203, 205, 235, 2135 & 2200 (AD3-152)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information: Install in Right Side (RS). Point element DOWN. Circulation heater is acceptable alternative.

All MF-65, 165, 255, 302, 304, 365 & 3165 (AD4-203)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in Left Side (LS). Circulation heater is acceptable alternative.

All MF-175, 180 & 265 (AD4-236)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information: Install in Left, 2nd from rear. Point element UP/DOWN. Circulation heater is acceptable alternative.

MF-90, 1080, 1085 & 285 (A4-300)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Replaces existing heater. Circulation heater is acceptable alternative.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

MASSEY FERGUSON - Continued

MF-1100, 1105, 1130 & 1135 (A6-354)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information: Install in Left, 2nd from rear. Point element UP. Circulation heater is acceptable alternative.

MF-1150, 1155 (AV510, 540)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001

Installation Information: Install one heater in each side (two heaters required). Circulation heater is acceptable alternative.

MF-1140 & MF-1145 (1120, 1125 - 1240, 1250, 1260 Mfg. prior to mid '90's before serial # E50101



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100066	400	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 3 o'clock.

MF-3120, MF-3140



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007

Installation Information: Install in Right Rear (RR) or Right Front (RF). Point element 12 o'clock. Circulation heater is acceptable alternative.

MERCEDES

MBE900 Series: OM904 & OM906



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500046	1000	120	60mm	Immersion	3600008

Installation Information: Installation in Right Rear (RR) core hole. Point element down, 6 o'clock.

2003 & Older MBE4000 Series / OM460



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500080	1500	120	Plate	Immersion	3600008

Installation Information: 3500080 - Replace plate on right side (center). Point element 9 o'clock. Do not install on left side.

MBE-HDEP 15.2 L



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500095	1500	120	27mm THD	Immersion	3600008

Installation Information: Installation in Right Rear (RR) core hole. Point element down, 6 o'clock.

2004 & Newer MBE4000 Series/OM460



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500082	1500	120	Plate	Immersion	3600008
3500083	1500	**240**	Plate	Immersion	8608377

Installation Information: Replaces plate on right side (center). Point element, 3 o'clock.

2009 & Older 2.7L Freightliner Sprinter Van



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100105	500	120	38mm THD	Freeze Plug	N/A

Installation Information: Right rear. May need to heat existing plug to remove.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

MINNEAPOLIS MOLINE



JetStar 3 (gas & diesel 206 CID), **U302** (gas 220 CID)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500026	400	120	3/8" NPT	Immersion	N/A

Installation Information: Replaces existing heater. Circulation heater is acceptable alternative.



M602, 604, 670, G705, 706, 900, 1000

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100038	600	120	1-1/2"	Freeze Plug	3600006

Installation Information: Replaces existing heater. Circulation heater is acceptable alternative.

MITSUBISHI



L3A (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Right Rear (RR). Point element 9 o'clock.



K3A & K3B (3 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100067	400	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Right Side (RS). Point element UP.



4G32 & 4G33 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

Installation Information: 4G32: Install in Left Center (LC). Point element 9 o'clock.
4G33: Install in Left Center (LC). Point element UP.



4G52, 4G53, 4G54 (4 cyl. engines)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006

Installation Information: Install in Right Center (RS). Point element 3 o'clock.



S4L2 (4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100078	400	120	35mm	Freeze Plug	3600006

Installation Information: Install Right Rear (RR). Point element 11 o'clock.



4G63 (2.0L 4 cyl.), **4G64** (2.4L 4 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100021	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 3 o'clock.



S6E & S6E2 (6 cyl.)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100078	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 3 o'clock.



6G72 (3.0L)

Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100055	600	120	1-5/8"	Freeze Plug	3600006

Installation Information: Install in Right Rear (RR). Point element 9 o'clock.

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MITSUBISHI FUSO

4D31 (201 CID), 6D14 (400 CID), 6D31 (302 CID), 6D16 (460 CID)
4M40 (2835cc SOHC), **4D36** (3567cc)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8604967	600	120	3/4" NPT	Immersion	N/A

Installation Information: Replaces 3/4" threaded plug on Left rear side of engine.

MWM MURPHY

D225 & D226 Series (2, 3, 4, 6 cylinder)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006

Installation Information: Replaces any freeze plug on Right side. Point element UP or DOWN.

NISSAN

H20, SD22, SD4-47 (2.2L), **SD-25, A12** (1.2L), **A15** (1.5L) (4 cylinder engines)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

Installation Information: H20: Install in Left Front (LF) or Left Rear (LR). Point element UP. SD-22, SD4-47, SD-25: Install in Left Front (LF). Point element DOWN. A15 install left front or left rear and point element 12 o'clock.

H20-2, H25 (4 cylinder engines)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100019	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 3 o'clock.

Z24 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100048	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 12 o'clock.

TD42 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100090	600	120	35mm	Freeze Plug	3600006

Installation Information: Install in Right Center (RC). Remove 3-bolt plate.

SD-33 & SD6-72 (3.2L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100023	400	120	35mm	Freeze Plug	3600006
3100108	400	120	35mm	Freeze Plug - 12" Cord	3600036

Installation Information: Install in 2nd and 4th Left side. Two heaters are required. Point element 12 o'clock.

P Series (4.0L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Right Front (RF).

LD-28 (2.8L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in 5th, Left side. Point element 12 o'clock.

Lower Radiator Hose Heater information - page 77 • Circulation Heater information - pages 74-77

NISSAN - Continued

FD6 (5.6L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Right Front (RF). Point element 3 o'clock.

OLIVER

All (except 1265, 1365, 1900)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500043	1000	120	3/4" NPT	Immersion	3600008

Installation Information: Install in cast elbow at front of engine - between radiator and engine block.

PACCAR

PX-6, PX-7 (6.7L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500022	750	120	3/4” NPT	Immersion	3600008

Installation Information: Installs in 3/4” NPT port to rear of oil cooler.

PX-8, PX-9 (8.3L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500032	1000	120	3/4” NPT	Immersion	3600008

Installation Information: Installs in upper 3/4” port to front of oil cooler.

MX-13



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500107	1500	120	26mm	Plate	3600008

Installation Information: Right Front (RF).

PERKINS

103.06 (KB 3 cyl.), **103.07** (KL 3 cyl.), **103.09** (KC 3 cyl.), **103.10** (KD 3 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100016	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 6 o'clock.

103.12 (KG 3 cyl.), **103.13** (KH 3 cyl.), **103.15** (KE/KJ 3 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 6 o'clock.

3-152 (C Series 3 cyl.), **900 Series** (CN)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information: Install in Right Side (RS). Point element 6 o'clock.

104.19 (KF/KK 4 cyl.), **104.22** (KR 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100049	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF). Point element 6 o'clock.

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PERKINS - Continued

4-108 (E Series 4 cyl.), **4-236** (LD 4 cyl.), **4-248** (LF 4 cyl.), **4-248-2** (LG 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information: Install in Left, 2nd from rear. Point element UP or DOWN.

4-236 (4 cyl.) (Engines with larger core hole)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100027	600	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left side - 2nd from rear.

4-135 (GB Series 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100023	400	120	35mm	Freeze Plug	3600006
3100108	400	120	35mm	Freeze Plug - 12” Cord	3600036

Installation Information: Install in Right Side (RS). Point element UP or DOWN.

4-154 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100010	400	120	30mm	Freeze Plug	3600005

Installation Information: Install in Left Side (LS). Point element UP or DOWN.

200 Series: 204.25 (GD 4 cyl.), **204.30** (GE 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100086	400	120	30mm	Freeze Plug	3600004

Installation Information: Install in Left Side (LS).

400 Series (4.41, T4.40), **4.0L**



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2”	Freeze Plug	3600007

Installation Information: Right side, point element up.

4-203 (J Series 4 cyl.)

(Engines with no starter obstructions)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Freeze Plug	3600003

Installation Information: Install in Left Side (LS). Point element up or down.

1004 (A Series 4 cyl.) (D Series 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007

Installation Information: Install in Right Rear (RR) or Right Front (RF). Point element 12 o'clock.

1104 (C Series 4 cyl.) (D Series)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500084	750	120	1-1/4”	Freeze Plug	3600008

Installation Information: Only use 3500084 when replacing existing freeze plug. 3500145 is recommended for all new installations. Install 3500145 Left Center (LC). Install 3500084 Right Rear (RR) or Right Front (RF) with element at 3 o’clock.

1104 Tier 4, 1204



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500145	600	120	3/4” NPT	Immersion	3600100

Installation Information: Left Center (LC).

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PERKINS - Continued

854



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100117	600	120	40mm	Freeze Plug	3600006

Installation Information: Left Center (LC).

700 Series 704.30 (4A 4 cyl), 704.30T (4C 4 cyl.), 704.26 (4C 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100101	400	120	50mm	Freeze Plug	3600006

Installation Information: Install in back of head. Point element 4 o'clock.

N Series: 4-300 (4 cyl.), 4-318 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100093	400	120	3/4" NPT	Immersion	3600003

Installation Information: Install in Left Side (LS).

T Series: 6-354 (6 cyl.), 6-354.4 (4 cyl.), 6-372 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100013	600	120	1-1/4"	Freeze Plug	3600022

Installation Information: Install in Right Rear (RR). Point element 12 o'clock.

6-354 (alternate), NA-120 (6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500027	750	120	Plate	Immersion	3600008

Installation Information: Install in back of head.

1006 (Y Series 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100045	600	120	1-1/2"	Freeze Plug	3600007

Installation Information: Install in Right Rear (RR), or Right Front (RF). Point element 12 o'clock.

540 (8 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001

Installation Information: Install one heater in each side.

640 (Z Series 8 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8605556	1500	120	1" NPT	Immersion	3600008

Installation Information: Install in Left Rear.

2006 and Newer, 1106D, 1206E



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500087	1000	120	1-1/4”	Immersion	3600008

Installation Information: Install in Right Rear.

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PEUGEOT

1.6L



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500147	400	120	N/A	Manifold Plug	N/A

Installation Information: Replaces Manifold Drain Plug.

TOYOTA

5R (1.9L 4 cyl.), **2J** (2.5L diesel)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006

Installation Information: Install in Left Front (LF) or Left rear (LR). Point element 12 o'clock.

4Y (2.2L 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100019	400	120	35mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 3 or 9 o'clock.

2F (4.2L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100071	400	120	50mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element 9 o'clock.

3F



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100101	400	120	50mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element at 45º angle.

UD TRUCK

FD35T (3.5L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100012	600	120	30mm	Freeze Plug	3600004

Installation Information: Replaces 30mm freeze plug on Right front of engine. Install element 3 o'clock.

FE6 & FE6T (6.9L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602441	1000	120	40mm	Freeze Plug	3600008

Installation Information: Replaces 40mm freeze plug on Right side of engine - 2nd from rear. Install element 5 o'clock.

NE6 & NE6T (7.4L 6 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8602492	1500	120	50mm	Freeze Plug	3600008

Installation Information: Replaces 50mm freeze plug on Left rear of engine.

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UD TRUCK - Continued

FD46TA



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100103	400	120	40mm	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR) (above fuel pump).

TD42T



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100090	600	120	35mm	Immersion	3600006

Installation Information: Install in Right center of oil cooler. Remove 3-hole plate.

VOLKSWAGEN

1588cc (049.6 & 068.5 4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100034	400	120	36.5mm	Freeze Plug	3600016

Installation Information: Install in Right Center (RC). Point element 6 o'clock.

VOLVO

TD60 & TD61 (334 CID), **TD70 & TD71** (409 CID), **TD73**(427 CID), **TD100 & TD101, VE10** (586 CID), **TD120, TD121, TD122, TD123** (732 CID)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
8600252	1000	120	44mm	Immersion	3600008
8600287	1500	120	44mm	Immersion	3600008
8600309	1500	**240**	44mm	Immersion	8608377

Installation Information: Replaces 44mm threaded plug on Left front of engine. Point element at 4 or 5 o'clock.

2002 & Newer VED-12



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500090	1000	120	Plate	Immersion	3600008
3500091	1500	120	Plate	Immersion	3600008

Installation Information: Mount below turbocharger at the Right center of engine.

VED-12(Engines manufactured prior to 2002)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500039	1000	120	Plate	Immersion	3600008
8607702	1500	120	Plate	Immersion	3600008

Installation Information: Mount below turbocharger at the Right center of engine.

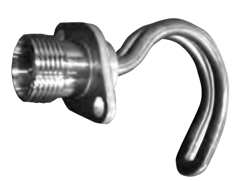
VE-D7



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500041	1500	120	1-3/4"-18	Immersion	3600008

Installation Information: Replace plug on Left rear of engine. Reuse existing seal. Point element at 1 o'clock.

D11 (10.8L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500099	1000	120	25mm	Immersion	3600085
3500100	1500	120	25mm	Immersion	3600085
3500101	1500	**240**	25mm	Immersion	3600086

Installation Information : Right rear (Contact Volvo dealer for Replacement O'Ring P/N 975664).

VOLVO - Continued

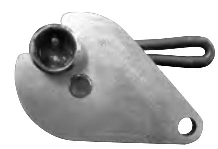
D13 (12.8L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500102	1500	**240**	25mm	Immersion	3600086
3500115	1500	120	25mm	Immersion	3600085
3500104	1000	120	25mm	Immersion	3600085

Installation Information : Right front, in coolant pipe.
(Contact Volvo dealer for Replacement O'Ring P/N 975664).

D16 (16.1L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500105	1500	120	62mm	Immersion	3600085
3500106	1000	120	62mm	Immersion	3600085

Installation Information : Right front

YANMAR

3T72HLE (3 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001

Installation Information: Install in Left Front (LF).

3TN66, 3TN72 (3 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3500001	400	120	Plate	Immersion	3600003

Installation Information: Install in Right Rear (RR).

4TN82E & 4TNE98 (4 cyl.)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Immersion	3600001

Installation Information: Install in Left Center (LC).

YYDXL4.4 1 D4T



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100003	400	120	1" NPT	Freeze Plug	3600001

Installation Information: Install in Left Center (LC).

ZETOR

All - except 278 (4.5L) & 417 (6.8L)



Part No.	Watt	Volt	Diameter	Type	Repl. Cord
3100065	600	120	1-3/4"	Freeze Plug	3600006

Installation Information: Install in Left Rear (LR). Point element UP.

NOTE: See next page (p. 70) for Universal Coolant Heater and Oil Pan Heater applications.

THREADED OIL PAN HEATERS (STAINLESS)

See page 80-81 for replacement cordset information

Oil Heaters:

- Easy to spec: Not engine model specific!
- **10 watts of power per quart of oil**
- Keeps oil warm and free flowing for instant lubrication
- Stainless steel low watt density heating elements for long life in oil and hydraulic fluid applications
- Can be used in oil pans, transmissions, hydraulic systems, etc.



All 120V Immersion heaters CSA approved

For oil heater selection, measure space and determine threading at installation location.

ACCESSORY: 8602824; 1/2" NPT Adapter Bushing. For use on steel pans only. *1/2" NPT oil pan heaters are supplied with weld or braze-in adapter.*



Note: To prevent potential damage to heater and fluid, oil pan heaters should only be used to keep warm oil warm. Do not use with cold oil.

WATTAGE	VOLTAGE	THREAD SIZE	ELEMENT LENGTH	FOR USE IN	WITHOUT THERMOSTAT	WITH THERMOSTAT	ELEMENT CONSTRUCTION
150	120	M22 x 1.5	7" (17.8cm)	Water/Oil	**3500047**	—	Stainless Steel
150	120	M25 x 1.5	3-1/2" (8.9cm)	Water/Oil	**3500071**	—	Stainless Steel
150	120	1/2" NPT	5" (12.7cm)	Water/Oil	**8609624**	—	Stainless Steel
150	120	1/2" NPT	7-3/4" (19.5cm)	Water/Oil	**2201712**	—	Stainless Steel
150	120	M22 x 1.5	3-1/2" (8.9cm)	Water/Oil	**8602859**	**8602794**	Stainless Steel
150	120	1" NPT	5-5/8" (14.2cm)	Oil	**2200635**	—	Stainless Steel
150	120	1" NPT	6" (15.2cm)	Water/Oil	**8609802**	**8609845**	Stainless Steel
150	120	1" NPT	6-5/8" (16.6cm)	Oil	**2204274****	—	Stainless Steel
150	240	1" NPT	6" (15.2cm)	Water/Oil	**8609837**	—	Stainless Steel
150	120	1-1/16" - 12 STOR	5" (12.7cm)	Water/Oil	**3500006**	—	Stainless Steel
150	120	1-5/16" 12 STOR	5" (12.7cm)	Water/Oil	**3500085**	—	Stainless Steel
150	240	1-5/16" 12 STOR	5" (12.7cm)	Water/Oil	**3500086**	—	Stainless Steel
150	120	M27 X 2	3-1/2" (8.9cm)	Water/Oil	**3500094**	—	Stainless Steel
300	120	1/2" NPT	5" (12.7cm)	Water/Oil	**8609683**	—	Stainless Steel
300	240	1/2" NPT	5" (12.7cm)	Water/Oil	**8609659**	—	Stainless Steel
300	120	3/4" NPT	11-1/8" (28.2cm)	Oil	**2201968**	—	Stainless Steel
300	120	M22 x 1.5	5-1/2" (13.9cm)	Water/Oil	**8602913**	**8602905**	Stainless Steel
300	120	3/4" NPT	5-1/2" (13.9cm)	Water/Oil	**8603243**	—	Stainless Steel
300	120	1" NPT	6" (15.2cm)	Oil	**2202662**		Stainless Steel
300	120	1" NPT	6" (15.2cm)	Water/Oil	**8609861**	**8609853**	Stainless Steel
300	120	1-5/16" STOR	5" (12.7cm)	Water/Oil	**3500079**	—	Stainless Steel
300	240	1-5/16" STOR	5" (12.7cm)	Water/Oil	**3500078**	—	Stainless Steel
300	120	M27 X 2	5-1/2" (13.9cm)	Water/Oil	**3500093**	—	Stainless Steel
450	120	1/2" NPT	7-1/2" (19cm)	Water/Oil	**8609713**	—	Stainless Steel
450	120	M27 X 2	7-1/4" (18.4cm)	Water/Oil	**3500049**	—	Stainless Steel
1000	120	1" NPT	9-1/2" (24cm)	Water/Oil	**8609098**	—	Stainless Steel

Note: Not all oil pans are equipped with ports. Inspect oil pan carefully before ordering to determine available ports. When no pre-threaded port exists, contact the engine manufacturer for proper installation procedure.

THREADED COOLANT IMMERSION HEATERS (COPPER)

WATTAGE	VOLTAGE	THREAD SIZE	ELEMENT LENGTH	FOR USE IN	WITHOUT THERMOSTAT	WITH THERMOSTAT	ELEMENT CONSTRUCTION
400	120	3/8" NPT	2-3/4" (6.9cm)	Water	**3500026**	—	Copper
400	120	3/4" NPT	1" (2.5cm)	Water	**3100093**	—	Copper
400	120	1" NPT	1" (2.5cm)	Water	**3100003**	—	Copper
600	120	3/4" NPT	1-3/8" (3.4cm)	Water	**8604967**	—	Copper
750	120	3/4" NPT	2-7/8" (7.1cm)	Water	**3500022**	—	Copper
1000	120	3/4" NPT	4" (10.1cm)	Water	**8602549**[1]	—	Copper
1000	240	3/4" NPT	4" (10.1cm)	Water	**8602514**[1]	—	Copper
1000	240	3/4" NPT	4-1/2" (11.4cm)	Water	**8600988**	—	Copper
1000	120	1" NPT	4-1/4" (10.6cm)	Water	**8600090**	—	Copper
1000	240	1" NPT	4-1/4" (10.8cm)	Water	**8600120**	—	Copper
1000	120	3/4" NPT	3-3/8" (8.5cm)	Water	**3500032**	—	Copper
1000	120	3/4" NPT	3-7/8" (9.7 cm)	Water	**3500043**	—	Copper
1500	120	3/4" NPT	4-3/4" (12cm)	Water	**8602611**[1]	—	Copper
1500	240	3/4" NPT	4-3/4" (12cm)	Water	**8602573**[1]	—	Copper
1500	120	3/4" NPT	5-1/4"(13.3cm)	Water	**8601011**	—	Copper
1500	240	3/4" NPT	5-1/4" (13.3cm)	Water	**8601054**	—	Copper
1500	120	1" NPT	5" (12.7cm)	Water	**8605556**	—	Copper
1500	240	1" NPT	5" (12.7cm)	Water	**8600260**	—	Copper
1500	120	1" NPT	3-3/4" (9.5cm)	Water	**3500013**	—	Copper
1500	240	1" NPT	3-3/4" (9.5cm)	Water	**3500031**	—	Copper

**Welding flange included. Designed for Caterpillar 3406 with BrakeSaver

[1]Element does not turn during installation.

- Ideal as a secondary heat source in trucks, station wagons, sleeper cabs, etc.
- 2-speed reversible fan motors
- 14-gauge construction - (models 200 and 300)
- 20-gauge construction (models 100, 400, and 500)
- Installation kit included
- Custom fabrication available - contact Customer Service for more information

*** Outlet direction featured in photo.**



Model 100 (150 CFM Max)

PART NO.	VOLT	CAPACITY (BTU/HR)	AIRFLOW (CFM)	CURRENT (AMPS)	DIMENSIONS (H X W X D)	OUTLET DIAMETER	OUTLET DIRECTION	WT. (LBS)
7000101	12	17,500	150	3.9	7.5 x 8.6 x 7.7" (191 x 219 x 196mm)	5/8" (16mm)	Rear Top	10.0
7000102	12	17,500	150	3.9	7.5 x 8.6 x 7.7" (191 x 219 x 196mm)	3/4" (19mm)	Rear Top	10.0
7000103	24	17,500	150	2.0	7.5 x 8.6 x 7.7" (191 x 219 x 196mm)	5/8" (16mm)	Rear Top	10.0
7000104	24	17,500	150	2.0	7.5 x 8.6 x 7.7" (191 x 219 x 196mm)	3/4" (19mm)	Rear Top	10.0



Model 200 (7000202, 7000205, 7000208) (250 CFM Max)

MODEL 200

PART NO.	VOLT	CAPACITY (BTU/HR)	AIRFLOW (CFM)	CURRENT (AMPS)	DIMENSIONS (H X W X D)	OUTLET DIAMETER	OUTLET DIRECTION	WT. (LBS)
7000201	12	30,000	250	9.4	9.3 x 11.5 x 10.6" (237 x 292 x 270mm)	5/8" (16mm)	Rear left	26.5
7000202	12	30,000	250	9.4	9.3 x 11.5 x 10.6" (237 x 292 x 270mm)	5/8" (16mm)	Left *	26.5
7000203	12	30,000	250	9.4	9.3 x 11.5 x 10.6" (237 x 292 x 270mm)	5/8" (16mm)	Right	26.5
7000205	12	30,000	250	9.4	9.3 x 11.5 x 10.6" (237 x 292 x 270mm)	3/4" (19mm)	Left *	26.5
7000206	12	30,000	250	9.4	9.3 x 11.5 x 10.6" (237 x 292 x 270mm)	3/4" (19mm)	Right	26.5
7000207	24	30,000	250	4.7	9.3 x 11.5 x 10.6" (237 x 292 x 270mm)	5/8" (16mm)	Rear Left	26.5
7000208	24	30,000	250	4.7	9.3 x 11.5 x 10.6" (237 x 292 x 270mm)	5/8" (16mm)	Left *	26.5



Model 300 (7000302, 7000305, 7000308, 7000311) (325 CFM Max)

MODEL 300

PART NO.	VOLT	CAPACITY (BTU/HR)	AIRFLOW (CFM)	CURRENT (AMPS)	DIMENSIONS (H X W X D)	OUTLET DIAMETER	OUTLET DIRECTION	WT. (LBS)
7000301	12	40,000	325	8.9	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	5/8" (16mm)	Rear Left	28.3
7000302	12	40,000	325	8.9	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	5/8" (16mm)	Left *	28.3
7000303	12	40,000	325	8.9	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	5/8" (16mm)	Right	28.3
7000305	12	40,000	325	8.9	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	3/4" (19mm)	Left *	28.3
7000306	12	40,000	325	8.9	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	3/4" (19mm)	Right	28.3
7000308	24	40,000	325	4.5	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	5/8" (16mm)	Left *	28.3
7000309	24	40,000	325	4.5	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	5/8" (16mm)	Right	28.3
7000311	24	40,000	325	4.5	7.7 x 17.4 x 9.4" (196 x 442 x 239mm)	3/4" (19mm)	Left *	28.3



Model 400 (130 CFM Max)

MODEL 400

PART NO.	VOLT	CAPACITY (BTU/HR)	AIRFLOW (CFM)	CURRENT (AMPS)	DIMENSIONS (H X W X D)	OUTLET DIAMETER	OUTLET DIRECTION	WT. (LBS)
7000401	12	13,500	130	4.3	3.1 x 13.0 x 9.0" (79 x 331 x 229mm)	5/8" (16mm)	Bottom	10.4
7000403	24	13,500	130	2.2	3.1 x 13.0 x 9.0" (79 x 331 x 229mm)	5/8" (16mm)	Bottom	10.4



Model 500 (7000502, 7000504, 7000506, 7000508) (150 CFM Max)

MODEL 500

PART NO.	VOLT	CAPACITY (BTU/HR)	AIRFLOW (CFM)	CURRENT (AMPS)	DIMENSIONS (H X W X D)	OUTLET DIAMETER	OUTLET DIRECTION	WT. (LBS)
7000501	12	17,500	150	4.4	7.6 x 8.5 x 4.3" (193 x 216 x 109mm)	5/8" (16mm)	Bottom Rt.	7.4
7000502	12	17,500	150	4.4	7.6 x 8.5 x 4.3" (193 x 216 x 109mm)	5/8" (16mm)	Rear Right *	7.4
7000503	12	17,500	150	4.4	7.6 x 8.5 x 4.3" (193 x 216 x 109mm)	3/4" (19mm)	Bottom Rt.	7.4
7000504	12	17,500	150	4.4	7.6 x 8.5 x 4.3" (193 x 216 x 109mm)	3/4" (19mm)	Rear Right *	7.4
7000505	24	17,500	150	2.2	7.6 x 8.5 x 4.3" (193 x 216 x 109mm)	5/8" (16mm)	Bottom Rt.	7.4
7000506	24	17,500	150	2.2	7.6 x 8.5 x 4.3" (193 x 216 x 109mm)	5/8" (16mm)	Rear Right *	7.4
7000508	24	17,500	150	2.2	7.6 x 8.5 x 4.3" (193 x 216 x 109mm)	3/4" (19mm)	Rear Right *	7.4

LITTLE BUDDY® INTERIOR WARMER



Part No. 2600900

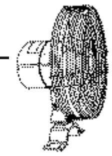
- Ideal for use in passenger, light-duty, and recreational vehicles
- 900 Watts - 120 Volt AC
- Mounts on floor or under dash. Mounting bracket included
- Compact size: 7” (17.6 cm) (L) x 4.5” (11.3 cm) (W) x 2.75” (7 cm (H)
- Cord length: 7.5 ft. (2.3 m)
- 3,000 BTU
- Includes a blower fan

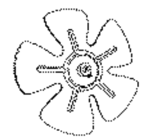
Part No. 3600055

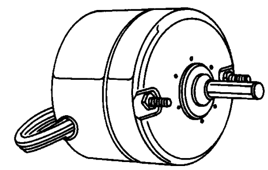
Car Warmer Replacement Cord

Defroster Fans, Heat Exchangers & Replacement Parts

PART NO.	SAME AS:	FOR USE IN MODEL NO.S	DESCRIPTION
DEFROSTER FANS			
7602855	—		12 Volt - Defroster Fan - 2 Speed
7602891	—		24 Volt - Defroster Fan - 2 Speed
INSTALLATION KITS			
7100001	—	—	Installation Kit (includes on/off switch, electrical terminals)
REPLACEMENT FAN BLADES			
7100002	—	100, 300, 400, 500	7" (17.6cm) Fan Blade
7100003	—	200	8" (20.1cm) Fan Blade
7100025	—	Model 7009001	6” (15.5cm) Fan Blade
DEFROSTER FAN REPLACEMENT PARTS			
7670036	—		Replacement 2-Speed Switch
7675755	—		Replacement Front Fan Guard
7675771	—		Replacement Rear Fan Guard
MOTORS			
7100004	—	100, 300, 400, 500, and 7009001	12-Volt Motor (short)
7100005	—	200	12-Volt Motor (long)
7100006	—	100, 300, 400, 500	24-Volt Motor (short)
7100007	—	200	24-Volt Motor (long)



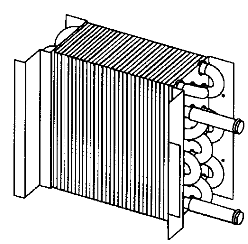




Note: 12/24 Volt Motor SHORT — Shaft Size .3122” x 1.44”
Note: 12/24 Volt Motor LONG — Shaft Size .3122” x 1.88”

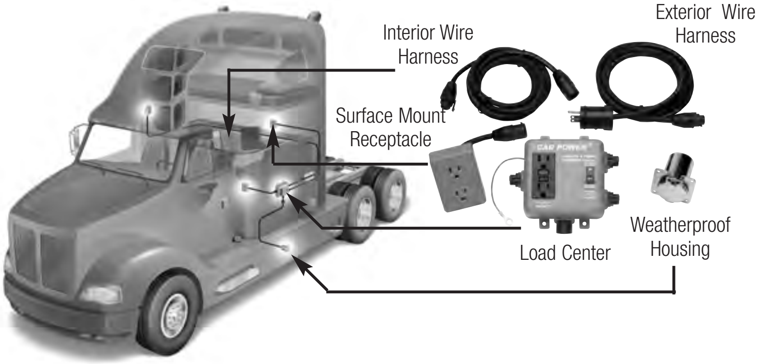
HEAT EXCHANGERS

PART NO.	DESCRIPTION
7100022	Model 100 Heat Exchanger (3/4" R top)
7100023	Model 100 Heat Exchanger (5/8" R top)
7100012	Model 200 Heat Exchanger (3/4" side)
7100013	Model 200 Heat Exchanger (5/8" side)
7100014	Model 200 Heat Exchanger (3/4" rear)
7100015	Model 200 Heat Exchanger (5/8" rear)
7100016	Model 300 Heat Exchanger (3/4" side)
7100017	Model 300 Heat Exchanger (5/8" side)
7100020	Model 400 Heat Exchanger (3/4" bottom)
7100021	Model 400 Heat Exchanger (5/8" bottom)
7100008	Model 500 Heat Exchanger (3/4" bottom)
7100009	Model 500 Heat Exchanger (3/4" rear)
7100010	Model 500 Heat Exchanger (5/8" bottom)
7100011	Model 500 Heat Exchanger (5/8" rear)



CAB POWER®

Long-haul Trucking Convenience Products



8500633 - BASIC KIT INCLUDES:	
8500637	Weatherproof Housing w/Cab Power Insignia
8500634	Surface Mount Outlet/Receptacle
8500641	54” Interior Wire Harness (to outlet)
8500640	85” Exterior Wire Harness (to housing)

CAB POWER ACCESSORIES:	
8500634	Surface Mount Outlet/Receptacle
8500635	Flush Mount Outlet/Receptacle
8500637	Weatherproof Housing w/Cab Power Insignia
8500640	85” Exterior Wire Harness (to housing)
8500641	54” Interior Wire Harness (to outlet)
8500638	96” Interior Wire Harness (to outlet)
8500639	163” Interior Wire Harness (to outlet)
8606048	Mounting Bracket For Weatherproof Housing
8500642	Inverter Outlet Extension Cord, 54”
8500643	Inverter Outlet Extension Cord, 96”
8500644	Inverter Outlet Extension Cord, 163”
8500647	Inverter, Panel-Mount Connector Kit (AC-in + AC-out)

- Reduce Idling
- Increase Cab Comfort & Convenience
- Increase Driver Retention
- Reduce Overall Fuel Cost
- Economical Option to Using APU

THE *CAB POWER*® SYSTEM is a series of pre-wired, modular components for cabs and sleepers of over-the-road trucks and service vehicles. The system allows for “living room” electrical convenience without the need to keep the truck engine idling by distributing power from APU’s, inverters and land based electrical grids (Shore Power).

CAB POWER® PLUS– *(Shore Power PLUS 1800 W Inverter Power)*



85006652 - CAB POWER PLUS 1800W INVERTER and WIRING KIT INCLUDES:	
8500658	1800W Inverter – Cab Power Ready (with connectors)
8500640	Cable - AC IN 85”
8500639	Cable – Interior Cab Power 163”
8500634	Surface Mount Interior Outlet
8500637	Weatherproof Housing w/Cab Power Insignia
Installation instructions	
15A Connectors	

CAB POWER PLUS WIRING COMPONENT & ACCESSORIES:	
8500640	Cable - AC IN 85”
8500639	Cable – Interior Cab Power 163”
8500638	Cable – Exterior Cab Power 96”
8500653	Negative Battery Cable 114”
8500654	Positive Battery Cable 90”
8500655	Positive Battery Cable 20”
8500656	Chassis Ground Cable 114”
8500657	Y-Splice Cable
8500659	Fuse Holder
8500660	200A Fuse
8500658	1800W Inverter – Cab Power Ready (with connectors)
8500634	Surface Mount Interior Outlet
8500637	Weatherproof Housing w/Cab Power Insignia

- Reduce Idling
- Increase Cab Comfort & Convenience
- Increase Driver Retention
- Reduce Overall Fuel Cost
- Economical Option to Using APU

Provides power to run standard household appliances and office equipment when mobile or using shore power!

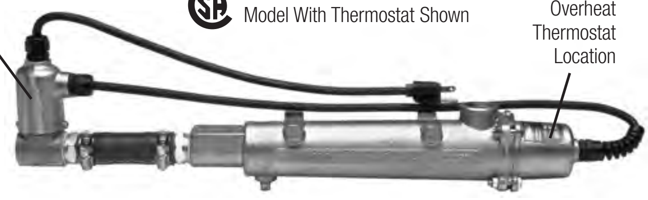
Freedom to travel and have the power you need!
(Includes 1800 W Inverter)

Complete 12 Volt DC to 120 Volt AC Battery Inverter Kit & Wiring All In One Package.

HIGH WATTAGE heavy duty engine pre-heater for use on industrial applications and big bore engines (14L+). *Our most powerful engine heater!*

All Circulation Heaters feature:

- Low Watt-Density (replaceable) heating elements (60-105 w/inch²) for long life
- 205°F (96°C) overheat thermostat
- NRTL/C approval (complies with UL/CSA)
- Thermally isolated regulating thermostat (models with t-stat)
- Four-bolt flange for easy element replacement
- 14 gauge SJOW cord (16 in. length - 40.6cm) is abrasion, oil, and grease resistant
- Nylon check valve
- Premium grade tin-plated phosphor bronze blade connections
- 1 inch NPT inlet and outlet
- 1/4 inch NPT drain
- 3° tapered, permanent-mold aluminum housing



Mounting space requirements (including thermostat):
27.5" (69.8cm) length x 3" (7.6cm) width x 6.5" (16.5cm) height.

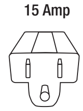
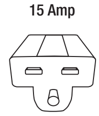
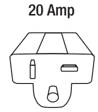
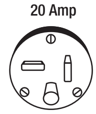
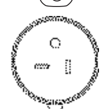
REPLACEABLE THERMOSTATS (DISC ONLY, NO HOUSING)	THERMOSTAT RANGES
3300094	Range A: 80ºF ON - 100ºF OFF (27°C ON - 38°C OFF)
3300095	Range B: 100ºF ON - 120ºF OFF (38°C ON - 49°C OFF)
3300096	Range C: 120ºF ON - 140ºF OFF (49°C ON - 60°C OFF)

High-Capacity Circulation Heaters - Complete kits, Ready to install

- Furnished with cord & molded plug (4000w Model features detachable plug)

HIGH WATTAGE BASIC HEATER	HEATER WITH THERMOSTAT RANGE A	HEATER WITH THERMOSTAT RANGE B	HEATER WITH THERMOSTAT RANGE C	WATTS	VOLTS	AMPS	REPLACEMENT ELEMENT	PLUG CONFIGURATION
3300001	3300011	3300021	3300031	1500	120	12.5		**(A)**
3300002	3300012	3300022	3300032	2000	120	16.7		**(C)**
—	3300014	—	—	2000	240	8.4		**(B)**
3300005	3300015	3300025	3300035	2250	120	18.8		**(C)**
—	—	—	—	2250	240	9.4		**(B)**
3300007	—	—	3300037	2500	240	10.4		**(B)**
—	3300018	—	—	3000	240	12.5		**(B)**
—	—	—	3300039	3500	240	14.6		**(B)**
—	—	3300030	—	4000	240	16.6	3300060	**(D)**

(A) Furnished with standard 120V male plug.
(B) Furnished with standard 240V male plug.
(C) Furnished with high-current 120V male plug. 20 Amp electrical service required.
(D) Plug not attached. High-current 240V detachable male plug is provided. 20 Amp electrical service required.

PLUG CONFIGURATIONS	(A)	(B)	(C)	(D)
	125 Volt 15 Amp	240 Volt 15 Amp	125 Volt 20 Amp	240 Volt 20 Amp
Standard Plug				
Weatherproof Plug				

A Note About Extension Cord Selection and Usage:

When using an extension cord with one or more heating devices, it is important that the TOTAL current draw of all devices not exceed the capacity of the extension cord or the AC circuit. Use only 3-wire GROUNDED extension cords. Ground Fault Interrupter (GFI) service is also recommended. See page 88 for more information on proper cord length and gauge.

NOTE: All circulation heaters on pages 74-77 are equipped with different male plugs depending on the wattage and voltage requirements of the heater. This diagram shows the plug configuration for the three wattage/voltage combinations that are used. Vehicles with heater hose connected to radiator cannot use circulation type heaters.

BASIC HEATERS—for custom installations
Heaters not furnished with regulating thermostat. Power cord is unfinished.
(Not supplied with plug. Designed to wire into junction box.)





Complete Unit Shown

Mounting space requirements:
22.5 in. (57.1cm) length x 3 in. (7.6cm) width x 4.5 in. (11.4cm) height.

BASIC HEATER	WATTAGE	VOLTAGE	AMPS	REPLACEMENT ELEMENT
3300041	1500	120	12.5	3300051
3300042	2000	120	16.7	3300052
3300045	2250	120	18.8	3300055

Optional Thermostat
(For use with basic heater only)

PART NO.	OPERATING RANGE
3300061	80°F ON - 100°F OFF (27°C ON - 38°C OFF)
3300062	100°F ON - 120°F OFF (38°C ON - 49°C OFF)
3300063	120°F ON - 140°F OFF (49°C ON - 60°C OFF)



Industrial Tank Heater - Series 41

- Thermostatically protected: Opens at 190°F (88°C), closes at 151°F (66°C)
- Vertical installation only
- Heavy Duty 3-wire 5 ft. (1.52m) attached cord, 2000W heater has 22” attached cord.
- 5/8" inlet and outlet
- Dimensions: 2-3/4" x 8-1/2" (7cm x 21.6cm)
- Replaceable element and thermostat



Series 41 Heaters & Replacement Parts

HEATER	WATTAGE	VOLTAGE	ELEMENT	THERMOSTAT
2204010	750	120	2204061	2204266
2204029	1000	120	2204088	2204266
2204037	1500	120	2204096	2204266
3300091	2000	120	3300093	2204266
*	1000	**240**	—	2204266
*	1500	**240**	2204126	2204266

* Replacement element and thermostat only.

CIRCULATION HEATERS Series 8000 Tank/Circulation Engine Heaters

Light-duty, off road, industrial and agricultural applications.

- Cylindrical design of heater and universal mounting strap allow for convenient, new or retrofit applications.
- Integral check valve supports extensive range of plumbing configurations.
- New top-side location of power cord connection provides damage protection from road debris and chemicals.
- Rugged diecast aluminum construction is corrosion and impact resistant.
- New detachable power cord enhances ease of installation.
- Copper heating element provides excellent heat transfer.
- Temperature sensing thermostat provides overheat protection.





Replacement Cord - Part No. 3309001 - 18”
Part No. 3309002 - 60”

PART NO.	WATTS	VOLTAGE	HOSE CONNECTION DIAMETER
3308001	750	120	5/8”
3308002	1000	120	5/8”
3308003	1500	120	5/8”

NOTE: Use Series 41 Heater for 2000 Watt Applications.

Heating & Accessory Products

INDUSTRIAL TANK/CIRCULATION ENGINE HEATER offers dependable engine starts in all temperatures. By circulating warmed coolant through an engine, it assures a quick start, reduces time to reach operating speed and enhances immediate full-load acceptance. Primarily used in genset applications.

- Rugged diecast aluminum construction is corrosion and impact resistant
- Low watt density copper heating element provides optimum performance
- Temperature sensing thermostat provides overheat protection. Regulating thermostats included in three heat ranges
- Temperature and oil resistant, permanently connected 5 ft. (1.52m) power cord with strain relief is flame retardant
- Water resistant terminal end cap protects against harsh chemicals
- Unique mounting system protects against road vibration
- Lead-free heater utilizes recyclable aluminum, plastic and copper to help protect the environment



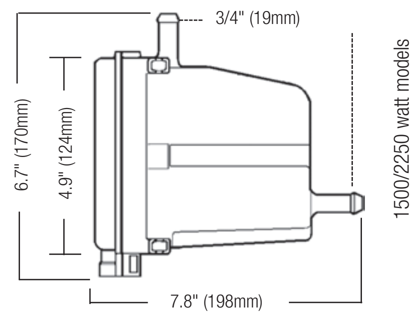
Heavy-Duty Industrial Series Heaters

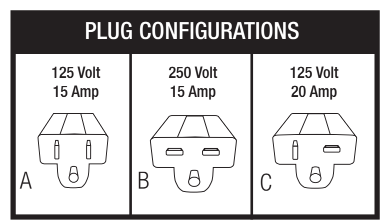
REGULATING THERMOSTAT RANGE						
ON/OFF 60°/80°F (10°/27°C)	ON/OFF 80°/100°F (27°/38°C)	ON/OFF 100°/120°F (38°/49°C)	MALE PLUG	VOLTS	AMPS	INLET/OUTLET SIZE
Heavy Duty/Industrial Series, Small Body Tank - 750 Watt						
3305028	3305032	3305036	Yes (A)	120	6.3	5/8"
—	3305034		No	240	3.1	5/8"
Heavy Duty/Industrial Series, Small Body Tank - 1000 Watt						
3305040	3305044	3305048	Yes (A)	120	8.3	5/8"
Heavy Duty/Industrial Series, Large Body Tank - 1500 Watt						
3305052	3305056	3305060	Yes (A)	120	12.5	3/4"
—	3305058	3305062	No	240	6.3	3/4"
Heavy Duty/Industrial Series, Large Body Tank - 2250 Watt						
3305064	3305068	3305072	No	120	18.8	3/4"
—	3305070	—	No	240	9.4	3/4"

PART NUMBER	WATTAGE	MALE PLUG	VOLTS	AMPS	INLET/OUTLET SIZE	TANK SIZE
3305004	2250	Yes (C)	120	18.8*	3/4"	Large Body

NOTE: 3305004 does not include regulating thermostat

Dimensions





For additional product information, refer to Circulation Data Sheet #LIT0311196.

The small size of some engine compartments, especially vehicles with transverse engines, may make circulation heater installation difficult even though it may be listed as a heating option. The following accessories are available for use with circulation heaters:



Part #3300085
5/8" (15.8mm) x 3/4" (19mm)
Metal "T" fitting



Part #3300086
1/4" NPT (6mm)
"A" Adapter to
5/8" (15.8mm) hose



Part #3300090
5/8" (15.8 mm) x 3/4" (19mm)
Plastic "Y" fitting

Lower Radiator Hose Heater

- Installs in minutes in non-corrugated lower radiator hose
- Available in five hose sizes for best coverage
- Thermostatically protected (245°F/118°C maximum heater temperature)
- Replaceable cordset

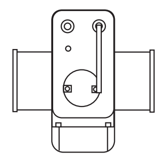


PART NO.	FITS HOSE SIZE (ID)	WATT	VOLT	DIM A	DIM B	DIM C
3200001	1" (2.4cm)	375	120	3.5" (8.6cm)	3" (7.5cm)	2.5" (6.4cm)
3200002	1-1/4" (3.1cm)	375	120	3.5" (8.6cm)	3" (7.5cm)	2.5" (6.4cm)
3200003	1-1/2" (3.7cm)	600	120	4" (10cm)	3" (7.5cm)	3" (7.5cm)
3200004	1-3/4" (4.3cm)	600	120	4" (10cm)	3" (7.5cm)	3" (7.5cm)
3200005	2" (5cm)	600	120	4.25" (10.5cm)	3" (7.5cm)	3.25" (8cm)

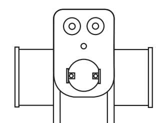
Note: All dimensions reflect approximate installation space requirements, not exact product measurements. Dimension "A" includes cord.

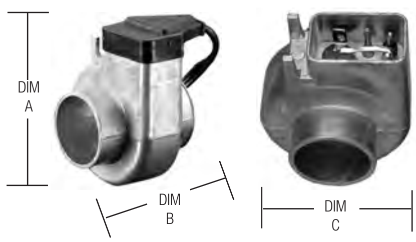
Replacement Cordsets
120 Volt AC, 42" (112cm)

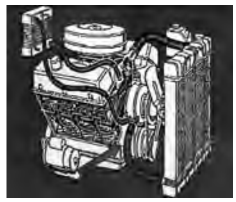
For heaters with this configuration.
Heater stamped with Model C (example 150C) on bottom of unit.
Part No. 3600009



For heaters with this configuration.
Heater stamped with Model D (example 150D) on bottom of unit.
Part No. 3600047



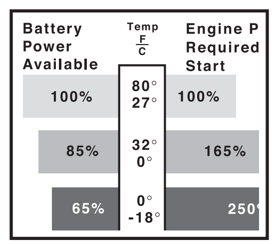




Lower Radiator Hose Heater
Hose must have a minimum 15° rise
Must be installed in smooth, molded hose
Must have direct access to engine water jacket

Two types of battery heaters boost battery power as much as 75%.

At 20° below zero, your battery (with less than half the normal available power) must start an engine that requires 350% more starting power.



Blanket Style Battery Heaters

- 120 Volt AC operation
- Blanket style heater warms battery core to 60° - 70° above ambient temperature for quick starts
- Thinsulate™ thermal insulation helps maintain battery temperature in warm or cold weather
- Complete with 30 inch (76cm) grounded cord
- All battery blanket heaters are 5 in. (12.7cm) tall, 1/2 in. (1.1cm) thick



PART NO.	LENGTH	WATTAGE	BATTERY SIZE
2800055	28" (71cm)	50	Series 26, 26R, 70
2800063	36" (91.5cm)	80	Series 24, 24F, 27, 27F, 74
2800071	72" (183 cm)	160	Truck batteries. Series-parallel systems.

™Thinsulate is a registered trademark of 3M corporation.

Battery Box Heater

- 200 Watt - 120 Volt AC or 240 Volt AC model available
- Preset thermostat maintains 80°F (27°C) battery warmth for quick starts
- Complete with 8 ft. (2.4m) grounded cord
- Dimensions: 9" (22.8cm) Length x 6" (15.1cm) Width x 3/4" (1.8cm) Height

Note: This product not available in Canada (CSA approved model not available)



Part No. 8500320 (120V)
Part No. 8500339 (240V)

CAUTION: Battery heaters are not recommended for nickel cadmium batteries.

MAGNETIC HEATERS

Magnetic utility heater provides heat when and where you need it.



Super Heat Magnet®

- 200 Watt - 120 Volt AC
- Built-in thermostat maintains optimum temperature—will not exceed 250°F (121°C)
- Quick grip handle protects hands from heat
- Dimensions - Length: 4-3/8" (11cm), Width: 2-1/2" (6.3cm), Height: 3" (7.5cm) (including handle)



PART NO.	DESCRIPTION
3400017	UL/CSA Approved Model - 6 in. (15cm) cordset

RADIANT HEATERS

Oil Pan Bolt on Radiant Heaters



- For applications with no core plug or core plug access
- Heating element conducts heat directly
- Universal mounting clamp included

PART NO.	DIMENSIONS	WATTS	VOLT	REPLACEMENT CORDSET
3400014	6" x 6" (15.2cm x 15.2cm)	500	120	3600002
3400011	4" x 4" (10.1cm x 10.1cm)	300	120	3600002
3400020	GM Ecotec 2.2L/2.4L	300	120	(2006 & Newer)

PAD HEATERS

Easily Adaptable to Component Surfaces

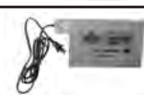
Application:
- Metal engine oil pans
- Metal transmission pans
- Metal hydraulic tanks
- Metal gear boxes
- Batteries (non-stick pad)
- Diesel fuel filters (velcro wrap)
- Hydraulic fluid filters (velcro wrap)

Benefits:
- Reliable cold weather starting
- Improved crankability for reduced engine wear
- Immediate lubrication for longer engine life
- Pre-applied adhesive for easy installation



120V Canadian Pad Part #'s are CSA Approved for Automotive use and includes a built in thermostat.

NOTE: 120V Heaters equiped with 6' cords. 12V Heaters equiped with 18" leads.

CANADIAN PART NUMBER	US PART NUMBER	WATTS	VOLTS	AMPS	PAD	OIL PAN CAPACITY	HYDRAULIC FLUID	APPLICATION	PICTURE
3400030	3400060	50	120	0.4	1.25" x 3.5"	1 - 3 US Qts (1.0 - 1.9 L)	n/a	Transmissions, Home Generators, ATV, Snowmobiles, Gear Boxes & Small Engines	
3400031	3400061	125	120	1.0	3" round	3 - 6 US Qts (2.9 - 5.7 L)	n/a	Small to Mid-Size Cars & Sedans. Examples: Kia, Honda, Hyundai.	
3400032	3400062	125	120	1.0	1.5" x 6"	3 - 6 US Qts (2.9 - 5.7 L)	n/a	Ribbed Oil Pans & Automotive Transmissions. Examples: Toyota 4Runner & European Cars.	
3400033	3400063	250	120	2.1	3.75" x 4.25"	5 - 13 US Qts (4.7 - 12.3 L)	10 to 30 Gallons	Most 6 Cylinder & Small Block V8 Engines. Marine Applications.	
3400034	3400064	500	120	4.2	5" x 7'"	13 - 27 US Qts (12.3 - 25.5 L)	20 to 50 Gallons	Mid-Size Trucks, SUVs & Medium to Heavy Duty Commercial Trucks.	
3400035	3400065	1000	120	8.3	6" x 10.75'"	26 - 48 US Qts (24.6 - 45.4 L)	50 to 100 Gallons	Mid-Size Trucks, SUVs & Medium to Heavy Duty Commercial Trucks.	
3400036	3400066	60	120	0.5	5.5" x 8.5'"	BATTERY WARMER (non-stick pad)	n/a	All Cars & Trucks. Most Batteries.	
3400038	3400068	180	120	105	13" x 20.5'"	BATTERY WARMER (non-stick pad)	n/a	Large Battery Pad Warmer Fits under 3-4 group 31 Batteries	see image 3400066
3400037	3400037	100	12	8.3	4" x 12'"	DIESEL FUEL FILTER WARMER (velcro wrap)	n/a	Diesel Vehicles Only Filter Housing Diameter: Minimum 3.5" (8.9 cm) Maximum 5.0" (12.7 cm)	
3400039	3400039	50	12	14.7	3" x 9'"	DIESEL FUEL FILTER WARMER (velcro wrap)	n/a	Diesel Vehicles Only Filter Housing Diameter: Minimum 2.75" (6.98 cm) Maximum 3.75" (9.52 cm)	see image 3400037

Replacement Cordsets: Freeze Plug and Engine Block Heaters

If you cannot locate a replacement freeze plug cordset part number from the application section of this publication, try matching the old cordset to the photos below to identify the correct replacement cordset.


Fig A


Fig B


Fig C


Fig D
(For Aluminum
& Brass Heaters)


Fig E
(For Steel Heaters)


Fig F


Fig G


Fig H


Fig I


Fig J

FIG	PART NO.	LENGTH	DESCRIPTION
A	3600001	5 ft. (1.52m)	Silicone cord w/right angle connector
A	3600002	5 ft. (1.52m)	Radiant heater replacement cord
C	3600003	5 ft. (1.52m)	Silicone cord with straight connector
H	3600004	5 ft. (1.52m)	Silicone cord with right angle connector (brass and aluminum heaters)
D	3600005	5 ft. (1.52m)	Silicone cord with straight connector
E	3600006	5 ft. (1.52m)	Silicone cord with 90° connector (steel heaters)
F	3600007	5 ft. (1.52m)	Reverse freeze plug cord
B	3600010	7.5 ft. (2.29m)	Silicone cord
G	3600016	6 ft. (1.83m)	Silicone cord with 90° connector
B	3600019	3 ft. (.9 m)	Replacement cord
E	3600021	94 in. (2.4m)	Silicone cord with 90° connector
E	3600036	1 ft. (30.3cm)	Replacement cordset with silicone connectors (steel heaters)
H	3600022	1 ft. (30.3cm)	Replacement cordset with silicone connector (brass and aluminum heaters)
A	3600023	1 ft. (30.3cm)	Replacement cordset with silicone connector (brass and aluminum heaters)
I	3600080	5 ft. (1.52m) Pyroil	Replacement Cordset with silicone connector (use with all Pyroil Freeze plug heaters)
J	3600082	5 ft. (1.52m)	GM Replacement Cordset with thermostat
J	3600083	5 ft. (1.52m)	GM Replacement Cordset with silicone connector, treaded nut (No t-stat)
J	3600100	5 ft. (1.52m)	GM Replacement Cordset with silicone connector (No t-stat)

NOTE: 3600082 must be used in all 2006 and newer GM passenger cars to avoid a Check Engine Light.

Replacement Cordsets: Heavy-Duty Immersion Heaters

Most “860” & "350" series heaters will use the following standard replacement cordsets: Most 120 Volt heaters ship with cord #3600008. Most 240 Volt heaters ship with #8608377.



PART NO.	DESCRIPTION	VOLTAGE	LENGTH	GA.
3600008	Heavy duty replacement cord	120	6 ft. (1.8m)	16
8608377	Heavy duty replacement cord	**240**	6 ft. (1.8m)	16
3600048	Hi-temp silicone repl. cord	120	6 ft. (1.8m)	16
3600015	Heavy duty replacement cord	120	5 ft. (1.5m)	16
3600024	Heavy duty replacement cord	120	1 ft. (30.1cm)	16
3600085	Hi-temp replacement cord - Volvo	120	6 ft. (1.8m)	14
3600086	Hi-temp replacement cord - Volvo	**240**	6 ft. (1.8m)	14

Accessories

Also see “Y-Cord” thermostat kits - page 84



Part No. 3600012 - Plug Protector

- Prevents freeze up - keeps moisture out
- Keeps plug contacts clean for optimum power and safety

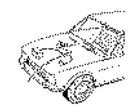


Part No. 3600018

Low-profile, 2 piece, Through-The-Grille Cordset
Avoid ugly plugs hanging from the grille

- Prevents plug from being visible
- Fits all vehicles
- 1500 Watt rating - 120 Volt AC
- Required for routing through narrow grille openings (1/3" x 1" [7, 62mm x 25, 4mm) minimum clearance)
- Cord length: 6 ft. (1.8m)





Narrow plug provides easy installation in tight grille areas

Part No. 3600040

3-Way Connector

- Use multiple cold weather products with one common cord
- 14 gauge 3-wire grounded cord
- Cord length: 23 in. (59cm)

Note: This product not available in Canada
(CSA approved model not available)



Part No. 3600045 - Cord Holder

Heating & Accessory Products

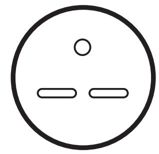
Weatherproof Receptacles

- Weatherproof receptacles enhance vehicle appearance with a clean install
- One-piece molded cordset with labor-saving QuickConnect™ receptacles
- Molded connector end snaps into receptacle housing, screws into heater - forming a positive weatherproof seal at both ends
- Round and square weatherproof housings available
- Receptacle enhances vehicle appearance - eliminating messy cords
- Field-wired model allows for custom installations
- Most models CSA approved except 3600041
- Housing dimensions: 2.5" (6.2cm) x 2.5" (6.2cm), mounting hole required: 1-5/8" (4.1cm)



Finish Options Available:

- Chrome
- Black Plastic
- Zinc Plated



*240V/15A

3 Weatherproof Receptacle Options:

- Standard Receptacle
- Single Light Receptacle
- Dual Light Receptacle

Single Integrated Indicator Light

Eliminate no starts with an Integrated Indicator Light on your engine block heater. Confirm engine block heater operation at a glance and ensure cold weather starts with Phillips & Temro's Integrated Indicator Light.

When the bright red LED light is on, it indicates that:

- Utility power is functional
- Your block heater is operating

Ordering options for the Single Integrated Indicator Light:
3600098: Harness
3600099: Harness and Receptacle
3600101: Receptacle with Indicator Light



Dual Integrated Indicator Light

Specially designed wire harness with two-light system allows operators or fleet personnel to quickly determine both power availability and heater operation.

- Indicator lights visible up to 150 ft. (50m)!
- 120 Volt - 15 Amp rating
- Minimum wattage required is 150W
- Chrome plated, four-hole mount square flanged weatherproof receptacle with gasket
- Mounting plate dimensions: 3.56" (90mm) (W) x 2.56" (65mm) (H)





(OPTION 1) Upper LED light illuminating (red) indicates the presence of AC voltage, providing instant visual proof of connections.

(OPTION 2) Lower LED light illuminating (red) indicates current flowing through heater (heater operating).

2 Options Are Available For The Dual Integrated Indicator Light:



OPTION 1 (One Heater Option)
Upper light shows AC voltage and proves connection.
Lower light shows current flowing through heater and proper operation.

OPTION 2 (Two Heater Option)
Upper light shows current flowing through heater #1 and proper operation.
Lower light shows current flowing through heater #2 and proper operation.

OPTION 1 – Standard Kit
(Includes weatherproof housing and cord)

PART NO.	CORD LENGTH
3600049	6 ft. (1830mm)
3600051	12 ft. (3660mm)

OPTION 2 – Replacement Cord Only

PART NO.	CORD LENGTH
3600049	6 ft. (1830mm)

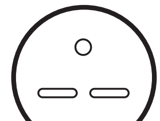
Indicator Light Kit

PART NO.	DESCRIPTION
3600061	Dual Heater Sensing Indicator Light Kit 84" x 120", 120V, parallel Y-Cord

Weatherproof Receptacles

- One-piece molded cordset with labor-saving QuickConnect™ receptacles
- Molded connector end snaps into receptacle housing, screws into heater - forming a positive weatherproof seal at both ends
- Round and square weatherproof housings available
- Receptacle enhances vehicle appearance - eliminating messy cords
- Field-wired model allows for custom installations
- Most models CSA approved except 3600041
- Housing dimensions: 2.5" (6.2cm) x 2.5" (6.2cm), mounting hole required: 1-5/8" (4.1cm)





*240V/15A

Weatherproof Cordsets & Accessories

Also see page 82 for NEW indicator light weatherproof cordset system.

FIG	PART NO.	DESCRIPTION	VOLTAGE	CORD LENGTH	WIRE GAUGE	RECEPTACLE SPECIFICATIONS
A	3600046	Weatherproof Cordset with frost plug connector	120	6 ft. (1.8m)	18	—
B	8605688	Weatherproof Field-wired receptacle—chrome plated	120	—	—	4-hole square
C	8605505	Weatherproof Field-wired receptacle—zinc plated	120	—	—	3-hole round
D	8605645	Replacement rubber boot for WP receptacle	—	—	—	
E	8605254	Replacement male plug for WP receptacle kit	120	—	—	
F	8606005	WP Silicone Cordset & chrome plated receptacle	120	6 ft. (1.8m)	16	4-hole square
F	8606013	WP Silicone Cordset & chrome plated receptacle	120	10 ft. (3.1m)	16	4-hole square
G	8606048	Mounting bracket—chrome plated	—	—	—	2 & 4 hole square
H	8606080	Receptacle only—chrome plated	—	—	—	4-hole square
N	3600088	Receptacle only—black	—	—	—	4-hole square
I	3600028	Weatherproof Cordset with Receptacle	120	8 ft. (2.4m)	16	2-hole square
I	3600014	Weatherproof Cordset with Receptacle	120	12 ft. (3.6m)	16	2-hole square
J	8608652	Weatherproof Cordset with Silicone connector	120	7 ft. (2.2m)	14	—
J	8605122	Weatherproof Cordset with Silicone connector	**240***	7 ft. (2.2m)	14	—
J	8608814	Weatherproof Cordset with Silicone connector	120	10 ft. (3.1m)	14	—
J	8608849	Weatherproof Cordset with Silicone connector	120	5.5 ft. (1.7m)	14	—
J	8608857	Weatherproof Cordset with Silicone connector	120	12 ft. (3.6m)	14	—
J	8608865	Weatherproof Cordset with Silicone connector	120	14 ft. (4.3m)	14	—
K	8602891	Weatherproof Cordset & zinc-plated receptacle	120	6 ft. (1.8m)	16	3-hole round
K	8602921	Weatherproof Cordset & zinc-plated receptacle	**240***	6 ft. (1.8m)	16	3-hole round
K	8602948	Weatherproof Cordset & zinc-plated receptacle	120	10 ft. (3m)	16	3-hole round
L	3600041	3-way connector w/chrome plated receptacle *(not CSA approved)*	120	5 ft. (1.5m)	14	4-hole square
	8608032	Square receptacle				2-hole w/gasket
	8605149	Square receptacle only				2-hole w/o gasket
	3600056	Round receptacle				3-hole w/gasket
C	8605513	Weatherproof field-wired receptacle - zinc plated	**240***			3-hole round
M	8606056	Mounting bracket				3-hole round


Fig A


Fig B


Fig C


Fig D


Fig E


Fig F


Fig G


Fig H


Fig I


Fig J


Fig K


Fig L


Fig M


Fig N

Now offering more thermostat models for increased application coverage.

Thermostatically Controlled Engine Immersion Heater Systems

- Saves money by reducing engine heater operating hours
- For new installations or replacement use
- For more economy use lower thermostat temperature settings

Parallel Weatherproof "Y" Cord Assemblies (for use with weatherproof housing)

Use PARALLEL Y-cords with two heaters.

FIG	PART NO.	DESCRIPTION	VOLTS	LENGTH	GA.	CHARACTERISTICS
B	8607311	Weatherproof Y-Cord Parallel	120	7/9 ft.	14	Includes 4-hole receptacle
C	8607990	Weatherproof Y-Cord Parallel	120	7/7 ft.	14	Two 7' lengths
C	8608059	Weatherproof Y-Cord Parallel	120	7/10 ft.	14	One 7' & one 10'
C	8608423	Weatherproof Y-Cord Parallel	120	14/14 ft.	14	Two 14' lengths
D	8608768	Weatherproof Y-Cord Parallel with AC outlet	120	1/7 ft.	14	One 12" (AC) & one 7'
D	8608792	Weatherproof Y-Cord Parallel with AC outlet	120	1/10 ft.	14	One 12" (AC) & one 10'

Series Y-Cords & Thermostats - *See following page for engine applications chart*

Use SERIES Y-cords with one thermostat and one heater.

FIG	PART NO.	DESCRIPTION	VOLTS	LENGTH	GA.	CHARACTERISTICS
C	3600064	Series Weatherproof Y-Cord	120	6/6 ft.	16	Two 6' lengths – Flat Wire
C	3600089	Series Weatherproof Y-Cord	120	8.5/14 ft.	14	One 8.5' & one 14' length
F	3600065	Series Y-Cord (standard plug)	120	6/6 ft.	16	Two 6' lengths
—	3600054	Series Weatherproof Y-Cord Kit with thermostat**	120	6/6 ft.	16	100°F/120°F (on/off)
E	8604037	Series Y-Cord with thermostat (standard plug)	**240**	6/6 ft.	16	100°F/120°F (on/off)
—	3600094	Weatherproof W-Cord Series/Parallel***	120	10/10/11.5 ft.	16	
A	3600068	1/2" NPT thermostat Only				40°F/55°F (on/off)
A	3600058	1/2" NPT thermostat only				55°F/75°F (on/off)
A	3600057	1/2" NPT thermostat only				100°F/120°F (on/off)
A	3600066	3/4" NPT thermostat Only				40°F/55°F (on/off)
G	3600081	#8 STOR thermostat only				40°F/55°F (on/off)
A	3600096	M18 x 1.5 thermostat only				40°F/55°F (on/off)
A	3600073	M22 x 1.5 thermostat only				40°F/55°F (on/off)
—	3600087	M27 thermostat only				40°F/55°F (on/off)

** Series Y-Cord with thermostat, weatherproof housing & dual indicator light

*** Series Y-Cord & parallel connection (for 2 heaters & 1 thermostat where one heater is always on & one heater is controlled by thermostat.)



Fig A



Fig B



Fig C



Fig D



Fig E



Fig F



Fig G



Weatherproof Series Y-Cord for Thermostat Option

PART NO.	CORD LENGTH	HEATER x Tstat
3600079	Weatherproof Series Y-Cord Only	72"x72"
3600090	Weatherproof Series Y-Cord Only	110"x55"
3600091	Weatherproof Series Y-Cord Only	100"x168"
3600097	Weatherproof Series Y-Cord Only	168"x168"



Dual Indicator Light Replacement Parts

PART NO.	DESCRIPTION
3600060	Chrome Replacement Indicator Light Plate, 120V
3600077	Black Replacement Indicator Light Plate
3600062	Indicator Light System Cord, 6 ft.
3600078	Indicator Light System Cord, 12 ft.
3600067	Replacement LED Light
8606080	Receptacle only, chrome plated (4-hole)

THERMOSTAT APPLICATION CHART

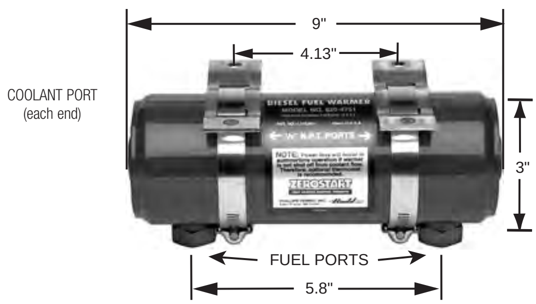
Thermostats save money by reducing engine heater operating hours.

ENGINE	PART NO.	DESCRIPTION
CATERPILLAR		
3406E	3600066	3/4" NPT
C9	3600081	#8 STOR
C11 & C13	3600081	#8 STOR
C15 & C16	3600081	#8 STOR
CUMMINS		
ISB	3600066	3/4" NPT
ISC	3600066	3/4" NPT
ISM	3600068	1/2" NPT
ISX	3600087	M27
DETROIT DIESEL		
Series-60	3600066	3/4" NPT
DD13, DD15, DD16	3600087	M27
INTERNATIONAL		
DT-466 (Non-EGR 1998-2005)	3600068	1/2" NPT
DT 5 & 7	3600087	M27
DT 11 & 13	3600087	M27
MACK		
E-Tech	3600068	1/2" NPT
PACCAR		
PX-6, PX-7	3600066	3/4" NPT
PX-8, PX-9	3600066	3/4" NPT

Lower operating costs by using #2 fuel all year

- Transfers heat from engine coolant to the fuel just before the fuel filter for maximum efficiency
- Eliminates clogged fuel filters when temperatures are below 10°F (-12°C)
- Exclusive stainless steel construction with no internal welds prevents coolant from leaking into fuel
- Minimal pressure drop
- Can be used as a heat exchanger in some hydraulic applications
- Port size: 1/2 - 14 NPT (Heavy-Duty)

Heavy Duty Model
Part No. 8208751



INLET FUEL TEMP. °F/°C	TEMPERATURE RISE OUTLET FUEL TEMP FUEL FLOW RATE 2-1/2 GPM	1-1/2 GPM	1/2 GPM
-30/-34	+32/0	+38/3	+52/11
-10/-23	+39/4	+45/7	+55/13
+10/-12	+47/8	+53/12	+59/15
+30/-1	+60/16	+62/17	+67/19
+50/10	+71/22	+74/23	+77/25
+70/21	+85/29	+87/31	+88/31

Based on a 140°F (60°C) coolant temperature.

Specifications

Pressure Drop ....less than 0.05 psi
Maximum operating pressure ....75 psi
Maximum operating temperature ....350°F (177°C)
Test pressure ....100 psi
Weight (without bracket) ....2 lbs. (907g)

NOTE: See full Arctic Fox Catalog for additional Diesel Fuel Heaters.

- Pre-heats combustion chamber in diesel engines for quick starts
- Measured/metered shot system limits the amount of starting fluid that can enter an engine—provides for optimum starting with less chance of waste or engine damage
- Convenient, one person operation
- Economical—about 16# per start
- High pressure replacement cylinders meet D.O.T. standards
- Available in 12 and 24 volt electrical and mechanically operated models
- Uses standard 1 inch cylinders

NOTE: Diesel Starting Fluid Systems are NOT for use with engines equipped with glow plug or flame thrower systems, or engines equipped with intake air heater.



E-Z Stock, E-Z Mount Electrical Kit (12 Volt) **- Part No. 8203237**

One part number covers most class 7 and 8 vehicles. Kit includes: 3 atomizers (8202966, 8202974, 8202982), switch, valve fitting, 48" nylon tube, dash decal, 16 gauge wire, valve & mounting brackets, surface-mount thermostat. Starting fluid cylinder NOT included.

Note: To change to 24V system - you need to purchase 8204020 Bracket/Valve assembly. All other components are compatible.



E-Z Mount Electrical Kit (12/24 Volt) **(See page 84 for applications)**

Replace existing systems, or custom design your own. Kit includes: Valve & mounting bracket, switch, valve fitting, dash decal, 48" nylon tubing. Atomizer not included - see page 85.



Mini E-Z Mount Electrical Kit (12 Volt) **- Part No. 8200001**

Provides the benefits of our full-size measured shot system in a compact design—for use with 250-500 CID applications. Includes: Mini valve with mounting bracket, pushbutton switch, valve fitting, 48" nylon tubing, dash decal. See page 84 for applications. Atomizer not included - see page 85 for information.



Standard Electrical Kit (12/24 Volt) **(See page 84 for applications)**

Direct replacement for some factory installed systems. Kit includes: Valve, switch, cylinder clamp, valve fitting, dash decal, 48" nylon tubing. Atomizer not included - see page 85.



Mechanical Kit (See page 84 for applications)

A simple, economical way to add ether injection. Kit includes: Valve, cylinder clamp, 84" control cable, valve fitting, dash decal, 48" nylon tubing. Atomizer not included - see page 85.



Aerosol Starting Fluid Valve (12 Volt) **Part No. 5801001**

Continuous flow system for replacement of industrial and agricultural applications. Uses standard 7.5 - 8.5 oz. spray can (not included). Leak-proof seal and easy one-hand installation of starting fluid can simplify use. Kit includes ether valve and elbow connection.

GENERAL APPLICATIONS (SPECIFIC ENGINES LISTED BELOW)

		EZ-MOUNT ELECTRICAL		STANDARD ELECTRICAL		MECHANICAL
Engine Size	**Shot Size**	**12V**	**24V**	**12V**	**24V**	
Under 250 CID (4L)	1.5 cc	8204136	N/A	8204179	N/A	N/A
250-500 CID (4-8L)	3 cc	8203938	8203946	8200106	8200165	8200211
450-950 CID (8-15.5L)	6 cc	8203954	8203962	8200157	8200238	8200270
Over 900 CID (14-7L)	12 cc	8203970	8203989	N/A	8200602	8200432

REPLACEMENT PARTS

		EZ-MOUNT ELECTRICAL		STANDARD ELECTRICAL		MECHANICAL
Engine Size	**Description**	**12 V**	**24 V**	**12 V**	**24 V**	
Under 250 CID	Valve Only	N/A	N/A	8204101	N/A	N/A
250-500 CID	Valve Only	8203997	N/A	8202427	N/A	8202397
450-950 CID	Valve Only	8204012	N/A	8202435	8202478	N/A
Over 900 CID	Valve Only	8204039	N/A	8202443	N/A	8202419
	Cylinder Clamp	N/A	N/A	8202575	8202575	N/A
	Switch	8202699	8202699	8202699	8202699	N/A
	84" Control Cable	N/A	N/A	N/A	N/A	8202559
	Wirestop	N/A	N/A	N/A	N/A	8202567
	Valve fitting	8202532	8202532	8202532	8202532	8202532
	48" Nylon tube	8202540	8202540	8202540	8202540	8202540
	Dash decal	8202583	8202583	8202583	8202583	8202583

Note: All starting fluid kits, except mini-ether kits, use starting fluid cylinder #8200327 (not included). All kits, except for #8203237 require atomizer. See following page for atomizer information.

ENGINE SPECIFIC APPLICATIONS

STARTING FLUID SYSTEMS APPLICATIONS

Make & Engine Model	E-Z Stock E-Z Mount	E-Z Mount Electrical		Standard Electrical		Mechanical	Atomizer
		12 V	24 V	12 V	24 V		
CATERPILLAR							
1100, 3208, 3306, others over 500 cid1	8203237	8203954	8203962	8200157	8200238	8200270	8202982
3406, 3408, 1693, D3461	8203237	8203954	8203962	8200157	8200238	8200270	8202966[1]
3406B turbo1	—	8203954	8203962	8200157	8200238	8200270	8203067[1]
31761	8203237	8203954	8203962	8200157	8200238	8200270	8202982[1]
CUMMINS							
855 CID series, all turbo over 400 cid	8203237	8203954	8203962	8200157	8200238	8200270	8202982
B Series - 4 cylinder	[4]	8204136	—	8204179	—	—	8202931
B Series - 6 cylinder	[4]	8203938	8203946	8200106	8200165	8200211	8202931
C Series	—	8203954	8203962	8200157	8200238	8200270	8202931
10 Litre, 11 Litre	8203237	8203954	8203962	8200157	8200238	8200270	8202982
DETROIT DIESEL							
3-53, 4-53, 3-71, 4-71	[4]	8203938	8203946	8200106	8200165	8200211	[2,3]
6-71, 6V-53, 8V-53, 6V-71, 6V-92	8203237	8203954	8203962	8200157	8200238	8200270	[2,3]
8V-71, 8V-92	—	8203970	8203989	8200548	8200602	8200432	[2,3]
8.2 Litre	—	8203954	8203962	8200157	8200238	8200270	8202958
Series 60 (677 & 774 CID)	—	8203954	8203962	8200157	8200238	8200270	8202966
FORD							
6.6L, 7.8L	8203237	8203938	8203946	8200106	8200165	8200211	8202974
INTERNATIONAL							
D150 (461 CID), D170, D190	8203237	8203954	8203962	8200157	8200238	8200270	[2,3]
D550 (549 CID), V800 (798 CID)	8203237	8203954	8203962	8200157	8200238	8200270	[2,3]
817 (817 CID), 9 Litre	8203237	8203954	8203962	8200157	8200238	8200270	[2,3]
D, DT31—DT312, DT360, DT436, DT466	[4]	8203938	8203946	8200106	8200165	8200211	8202974
MACK							
Midliner	—	8203938	8203946	8200106	8200165	8200211	8203016
ALL 6 Cylinder	—	8203954	8203962	8200157	8200238	8200270	8202990
864, 865 & 866 V-8 series	—	8203954	8203962	8200157	8200238	8200270	8202982
MERCEDES TRUCK							
ALL	—	8203938	8203946	8200106	8200165	8200211	8202958
PERKINS							
ALL	[4]	8203938	8203946	8200106	8200165	8200211	8202982

If your engine is not under "Specific Applications", then choose a kit based on the engine size.

[1]Air-to-air aftercooled engines (ATAAC) generally will use an 8202982 atomizer installed in pipe between discharge side of aftercooler and engine manifold.

[2]Use 8202966 if installed in blower box or manifold.

[3]Use 8202982 if installed in air intake horn.

[4]Mini ether system (#8200001) may be used for this application.

Starting Fluid System Atomizers

- Designed for most engines with 1/8" or 1/4" NPT opening
- Provides proper direction and atomization of pressurized fluid
- Sintered bronze filter maintains purity of intake air
- Spray pattern clearly marked for easy installation



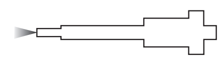
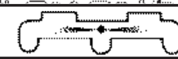
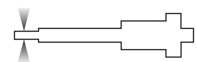
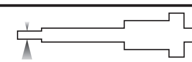
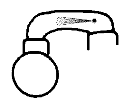
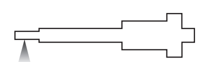
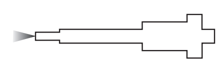
Dual Atomizer Kit
(for use with "V' engines)
#8203091



Atomizer (see below)
(1/8" x 1-1/4")

1/4" Bushing
#8203032

Atomizer Applications

PART NO. ORIFICE/SIZE	APPLICATIONS	LOCATION	SPRAY PATTERN
8203067 .018	Caterpillar 3406B Turbo	Pre-tapped hole in aftercooler 	
8202931 .011	Cummins B & C Series	Pre-tapped manifold 	
8202966* .018 Blue	Cummins Non-Turbo & other manifolds over 2"	Center intake manifold 	
	Detroit Diesel blower box	Center blower box	
8202990 .018	Mack in-line 6	Pre-tapped hole between cylinders #5 & #6 	
8203016 .013	Mack Midliner	Air intake pipe or intake manifold	
Under 500 CID **8202974*** .013 Yellow	Ford 6.6/7.8L, Cummins & Perkins in-line, all Turbocharged engines	Direct ether flow against flow of incoming air 	
8200003 .018	Cummins 600 Swivel Style		
8200004 .013	Cummins 600 Swivel Style		
Over 450 CID **8202982*** .018 Red	(Pressure side of turbo), DDA or IH Air Intake Horn		
8202958 .013	DDA 8.2 Litre	Pre-tapped hole in air cleaner adapter	
8203008 .018	Ford industrial diesel	Direct flow of starting fluid into air stream, not directly into cylinder.	

*Included in kit 8203237 Note: All atomizers 1/8" NPT.

Diesel Starting Fluid System Thermostats

- Locks out electrical valve operation at specified engine temperatures
- Surface mount installs without draining engine coolant
- Threaded 1/2" NPT installs directly in any 1/2" NPT opening in water jacket



Surface Mount



Threaded Style

PART NO.	TYPE	TEMP ON	TEMP OFF
8200386	Surface Mount	60°F (16°C)	85°F (29°C)
8202281	Threaded	45°F (7°C)	65°F (18°C)
8291837	Threaded	70°F (21°C)	100°F (38°C)



8200327 8201277

D.O.T. Approved Replacement Starting Fluid Cylinders

PART NO.	DESCRIPTION	SIZE	NOZZLE
8200327	18 oz. 1" neck (Used with most kits)	3" x 11"	1" - 20
8201277	21 oz. 1" neck (Fits KBI Dieselmatic kits)	4" x 8"	1" - 20
8203903	1" standard gaskets (cork gasket flat)	Pkg. of 50	

NOTE: All ZeroStart® Diesel Starting Fluid kits require cylinder #8200327.
Gaskets are not included with cylinders.

MINIMUM QUANTITY OF STARTING FLUID THAT CAN BE SHIPPED IS 1 COMPLETE CASE (12 CYLINDERS).

STARTING FLUID CYLINDERS ARE NOT RETURNABLE.

NOTE: A disposal fee will be charged for each cylinder included in a product return.

NOTE: MSDS pages are available on our website at **www.phillipsandtemro.com.**

VIBRA® Dump Body Vibrators



Vibra® Dump Truck Body Vibrators deliver fast, complete and clean discharge of sticky, compacted or frozen materials from dump truck bodies and dump trailers. Welded to the underside of the dump box, Vibra® Dump Truck Body Vibrators use vibrating thrust to dislodge materials from the dump body. (90-Day Warranty)

VIBRA® 2000 Designed for use on single-drive axle vehicles with dump bodies 10 feet (3m) in length and shorter, and for use on drop-in hoppers (asphalt and cement contractors, landscapers and anyone using smaller dump truck/tipper bodies).

VIBRA® 3000 Designed for use on tandem, tri-axle dump trucks and end-dump trailers with dump bodies ranging from 10 feet (3m) to 40 feet (12m) in length (bottom dump trailers, roll-off containers, hoppers and rubbish haulers).

VIBRA® 3000-I Designed for severe service applications with large, heavy, rigid dump boxes. Designed for use on tandem, tri-axle dump trucks and end-dump trailers with dump bodies ranging from 10 feet (3m) to 40 feet (12m) in length (bottom dump trailers, roll-off containers, hoppers, larger tipper/dump boxes and rubbish haulers), (formerly Vibra 4000). **LTL shipping required, no exceptions.**

Electric Kit includes:

- 34 ft. Cable
- Switch
- Magnetic Relay
- Primary Wire
- Connectors



* 12 volt version shown.
24 volt is a sealed solenoid.

PART NO.	SERIES	TYPE	POWER REQUIREMENTS	THRUST IMPACT FORCE	DIMENSIONS	OPERATING TEMPERATURE	INSTALLATION KIT	SHIPPING WEIGHT
8000581	V2000	Electric	12 volt 380 amp	2000 lbs (907 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included (Underhood)	110 lbs. (50 kg)
8000905	V2000	Electric	12 volt 380 amp	2000 lbs (907 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included[1] (Underhood)	103 lbs. (47 kg)
8000875	V3000	Electric	12 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included[3] (Underhood)	104 lbs. (52 kg)
8000867	V3000	Electric	12 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included[1] (Underhood)	100 lbs. (45 kg)
8001014	V3000	Electric	12 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included[2] (Underhood)	108 lbs. (45 kg)
8000883	V3000	Electric	24 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included (Underhood)	115 lbs. (52 kg)
8000840	V3000	Hydraulic	5.5 Gpm@ 1800 PSI	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Not Included	115 lbs. (52 kg)
8003301	V3000-I	Electric	12 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included[2] (Underhood)	115 lbs. (52 kg)
8003302	V3000-I	Electric	12 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included[1] (Underhood)	100 lbs. (45 kg)
8003303	V3000-I	Electric	12 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included[3] (Underhood)	115 lbs. (52 kg)
8003304	V3000-I	Electric	24 volt 380 amp	3000 lbs (1360 kg)	35" x 9" x 6-5/8" (890 x 230 x 168mm)	-30° to +140° F (-34° to +60° C)	Included (Underhood)	115 lbs. (52 kg)

[1]Switch, solenoid wiring hardware only - power cable not included
[2]Includes standard installation kit with 44 ft. (13.4m) cable
[3]Includes standard installation kit with 34 ft. (10.3m) cable

Standard Installation Kits include 34 ft. (10m) #4 AWG cable

Dump Body Vibrator Accessories

MODEL NO.	DESCRIPTION
8000980	Aluminum mounting plate
8000956	Accessory Package - V3000

Dump Body Vibrator Replacement Parts

MODEL NO.	SHAFT BEARING	COUPLING WITH RUBBER INSERT	STEEL HOOD COVER	END CAP (2)	INSERT ONLY (FOR COUPLING)	MOTOR	SOLENOID	SWITCH
8000581	8001081	8001154	8001367	8001006	8001200	8001030	8001251	8001316
8000905	8001081	8001154	8001367	8001006	8001200	8001030	8001251	8001316
8000875	8001081	8001154	8001367	8001006	8001200	8001030	8001251	8001316
8000867	8001081	8001154	8001367	8001006	8001200	8001030	8001251	8001316
8000883	8001081	8001154	8001367	8001006	8001200	8000964	8000948	8001316
8000840	8001081	8003305	8001367	8001006	8001200	8000859	8000948	8001315
8003301	8001170	8001154	8001367	8001006	8001200	8001030	8001251	8001316
8003302	8001170	8001154	8001367	8001006	8001200	8001030	8001251	8001316
8003303	8001170	8001154	8001367	8001006	8001200	8001030	8001251	8001316
8003304	8001170	8001154	8001367	8001006	8001200	8000964	8000948	8001316

90% of Maximum Temperature rise of engine will be reached in 5 hours of operation, but heater is designed for continuous overnight use.

TEMP °F/°C	Starting System	Engine Class			
		Small Diesels 150 to 350 CID (2.4 to 5.7 liters)	**Medium Duty Diesels** to approx. 550 CID (9.0 liters)	**Heavy Duty Diesels** to approx. 1150 CID (18.8 liters)	**Large Duty Diesels** Industrial/Off Highway
40/4	**Coolant Heater**	400 to 750 Watt Immersion, 1000 Watt Circulation Heater	750 or 1000 Watt Immersion, 1500 Watt Circulation Heater	1500 Watt Immersion, 1500 Watt Circulation Heater,	2500 Watt Tank, 2250-2500 Watt Circulation Heater,
↓	**Oil Pan Heater**	150 Watt Immersion with thermostat	150 Watt Immersion or 300 Watt Clamp-on	300 Watt Immersion or 500 Watt Clamp-on	300 Watt Immersion
0/-18	**Additional Products**	Measured Shot Ether Kit, Battery Warmer	Measured Shot Ether Kit, Battery Warmer	Measured Shot Ether Kit, Battery Warmer	Measured Shot Ether Kit, Battery Warmer
0/-18	**Coolant Heater**	600 or 750 Watt Immersion, 1000 Watt Circulation Heater	1000 Watt Immersion, Circulation Heater,	1500 Watt Immersion, 2000 Watt Tank, 2000-2250 Watt Circulation Heater	2500 Watt Tank, 2250-3500 Watt Circulation Heater
↓	**Oil Pan Heater**	150 Watt Immersion with thermostat	150 Watt Immersion or 300 Watt Clamp-On	300 Watt Immersion or 500 Watt Clamp-On	450 Watt Immersion
-30/-34	**Additional Products**	Measured Shot Ether Kit, Battery Heater	Measured Shot Ether Kit, Battery Heater	Measured Shot Ether Kit, Battery Heater	Measured Shot Ether Kit, Battery Heater
-30/-34	**Coolant Heater**	750 Watt Immersion, Circulation Heater	1500 Watt Immersion, 2000-2250 Watt Circulation Heater	2000 Watt Immersion, 2500-3500 Watt Circulation Heater	(2) 2500 Watt Circulation, (2) 2500-3500 Watt Circulation Heaters
↓	**Oil Pan Heater**	150 Watt Immersion with thermostat	300 Watt Immersion or 500 Watt Clamp-on	450 Watt Immersion	450 Watt Immersion
-60/-51	**Additional Products**	Measured Shot Ether Kit, Battery Heater	Measured Shot Ether Kit, Battery Heater	Measured Shot Ether Kit, Battery Heater	Measured Shot Ether Kit, Battery Heater

Recommended Wire Gauges for Long-Length Power Supply Cords

LENGTH (FT)	CURRENT CARRYING CAPACITY (IN AMPERES)									
	4	6	8	10	12	14	16	18	20	25
15	18	18	16	16	16	16	14	14	12	12
25	18	18	16	16	14	14	12	12	12	10
50	18	18	16	16	14	14	12	12	12	10
100	16	16	14	14	14	14	12	12	10	10
150	16	14	12	12	12	12	10	10	10	8

Recommended Wire Gauge

Current Used on Heaters of Various Wattages and Voltages

WATTS	AMPERES @ 120 VOLTS	AMPERES @ 240 VOLTS	COST PER HOUR*
75	0.63	0.31	.008
100	0.83	0.42	.010
150	1.25	0.63	.015
200	1.67	0.84	.020
300	2.50	1.25	.030
450	3.75	1.88	.045
500	4.17	2.08	.050
750	6.25	3.12	.075
850	7.08	3.54	.085
1000	8.33	4.16	.100
1500	12.50	6.25	.150
2000	16.67	8.34	.200
2500	20.83	10.42	.250

*** Based on 10¢ per KWH**

WARRANTY

This limited warranty is expressly limited to the Company's products that have been purchased by the original consumer purchaser or for purposes of resale or use in the ordinary course of the purchaser's business. The term original consumer purchaser is defined as a person who purchases Company products for personal, family, or household use.

The Company's products are warranted against defects in materials and workmanship for a period of one year from date of purchase by purchaser. Sales receipt or proof of purchase must accompany product when returned to location of purchase. The exclusive remedy for any product found to be defective under this limited warranty consists of the repair or replacement of the defective product. This limited warranty does not apply to defects which arise from normal wear and tear, accident, misuse, abuse, neglect, mishandling, misapplication, faulty installation, modification, improper or extraordinary use or use inconsistent with any instruction or recommendation issued by the Company.

The foregoing limited warranty is exclusive and in lieu of all other warranties, whether written or oral, express, implied or statutory.

*** EXCLUDES DUMP BODY VIBRA — 90 DAY WARRANTY ***

NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL APPLY. THE LIMITED WARRANTY CONTAINED HEREIN DOES NOT EXTEND TO INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF A BREACH OF THIS WARRANTY.

To obtain performance of this limited warranty, the alleged defective product must be returned, together with reasonable proof of purchase, postage or freight prepaid, directly to:

In U.S.A.
Warranty Department
Phillips & Temro Industries Inc.
9700 West 74th Street
Eden Prairie, MN 55344

In CANADA
Contact Phillips & Temro Customer Service
customerservice@phillipsandtemro.com
800-328-6108

The Company will return the repaired or replaced product, postage or freight prepaid. Final determination of defects shall be made in accordance with procedures established by the Company.

This limited warranty gives the original consumer purchaser specific rights. You may have other rights which vary from state to state or province to province depending upon the location of your residence. Some states do not allow the exclusion or limitation of incidental or consequential damages.

Manufacturer's rights retained:

The Company reserves the right to make changes in design, additions or improvements to any of its products at any time without incurring any obligation whatsoever to install or replace the same or improve upon products previously manufactured.

NOTE: Warranty credit will be issued at current years price.

Cette garantie limitée est expressément réservée aux produits de la Société qui ont été achetés par le consommateur-acheteur d'origine ou aux fins de revente ou d'utilisation dans le cours normal des affaires de l'acheteur. Le terme « consommateur-acheteur d'origine » se définit comme la personne ayant fait l'acquisition des produits de la Société à des fins personnelles, familiales ou domestiques.

Les produits de la Société sont garantis contre tout défaut matériel et vice de fabrication pendant une période d'un an à partir de la date d'achat par l'acheteur. Un reçu de caisse ou une preuve d'achat doit accompagner le produit lorsqu'il est retourné au lieu de l'achat. Le recours exclusif offert pour tout produit qui se révélera défectueux en vertu de cette garantie limitée consiste à réparer ou à remplacer le produit défectueux. Cette garantie limitée ne s'applique pas aux défauts découlant d'une usure normale, d'un accident, d'un mauvais emploi, d'un abus, d'une négligence, d'une mauvaise manutention, d'une mauvaise utilisation, d'une mauvaise installation, d'une modification, d'une utilisation inadéquate ou inhabituelle et d'une utilisation contraire aux instructions ou aux recommandations fournies par la Société.

La garantie limitée ci-dessus est exclusive et remplace toute autre garantie, qu'elle soit écrite ou orale, expresse, tacite ou statutaire.

*** N'inclus pas le ' ' Dump Body Vibra ' ' 90 jours de garantie. ***

AUCUNE GARANTIE IMPLICITE DE QUALITÉ MARCHANDE ET DE CONVENANCE PRÉCISE N'EST APPLICABLE. LA GARANTIE LIMITÉE CONTENUE AUX PRÉSENTES NE S'APPLIQUE PAS AUX DOMMAGES INDIRECTS CAUSÉS PAR L'UTILISATION DE CE PRODUIT OU SURVENANT EN RAISON D'UNE VIOLATION DE CETTE GARANTIE.

Pour obtenir l'exécution de cette garantie limitée, le produit présumé défectueux doit être retourné accompagné d'une preuve d'achat raisonnable et l'affranchissement ou le fret payé d'avance, directement à :

Aux États-Unis
Service de la garantie
Phillips & Temro Industries inc.
9700 West 74th Street
Eden Prairie, MN 55344

Au Canada
Phillips & Temro Industries ltée
customerservice@phillipsandtemro.com
800-328-6108

La Société retournera le produit réparé ou remplacé sans frais d'expédition. La décision définitive quant aux défauts sera prise conformément aux procédures établies par la Société.

Cette garantie limitée donne au consommateur-acheteur d'origine des droits particuliers. Vous pouvez bénéficier d'autres droits qui varient selon votre état ou votre province de résidence. Certains états n'autorisent pas l'exclusion ou la limitation des dommages indirects.

Droits retenus par le fabricant :

La Société se réserve le droit de modifier ses produits, de faire des ajouts ou d'apporter des améliorations en tout temps et sans aucune obligation d'installer ou de remplacer lesdits produits ou les produits améliorés fabriqués ultérieurement.

REMARQUE : Garantie des crédits accordé correspondra au prix année en cours.

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9700 West 74th Street
Eden Prairie, MN 55344
Phone: 952-941-9700
Toll-free: 800-328-6108
Fax: 952-941-2285
sales@phillipsandtemro.com
customerservice@phillipsandtemro.com

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